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No. 1.

SOFTENING OF THE BRAIN, WITH GENERAL TUBERCULOSIS.

BY WALTER CHANNING, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Miss —, aged 24, came under my care more than a year ago; had lived some time in a fever and ague country, and had for some time suffered from the disease. It was irregular in its attacks since her return home, but its paroxysms were still well marked. She had long suffered from dysmenorrhœa. Her health was not seriously impaired. Her appetite and digestion were good, and there was no emaciation present. Her pulse was natural, and her spirits good—strength sufficient. Upon examination, the opening in the hymen was so small as scarcely to admit the end of the little finger. It was a firm, thick ring, and much pain attended the examination. The os uteri was felt pressing upon the hymen, and preventing further examination. Above the brim of the pelvis and near the symphysis pubis was a firm tumor, about three inches in height, and becoming less elevated as it passed towards the iliac fossa. Tents were introduced by an attendant into the opening of the hymen. They had a small quantity of belladonna ointment applied to them. For the intermittent, sulphate of quinine was given, and, after a time, Fowler's solution. As the latter, in small doses, produced uneasiness in the stomach, it was not long continued. At length, the intermittent was entirely subdued. Tincture of iodine was applied over the uterine tumor, and pills of quinine, extract of belladonna and conium were given for the dysmenorrhœa. Under treatment the tumor gradually disappeared, the opening in the hymen acquired natural size, the womb resumed its natural position, and the dysmenorrhœa ceased.

Miss — living some miles from the city, for the most part called upon me. After some time she called again. The head was now the seat of trouble. It had existed for some time. There was no constitutional disturbance. At times there was vomiting. The pain did not interfere with her ordinary avocations. It was for a time

paroxysmal, and was accompanied with shivering—or rather chattering of the teeth, resembling somewhat an imperfect intermittent fit, though she thought it in many circumstances unlike that disease. There seemed no indication for active treatment. The nitrate of potassa and other alkalies gave temporary relief. Various external irritants were applied to the nape of the neck. The appetite was perfectly good, as was digestion. There was no costiveness. The renal and uterine functions were natural and regular. There was no wasting. Still the headache remained, and at length became more severe. It was local, and its seats were unusual. For instance, it was at one time seated in the line where the hair is parted, arising from the upper part of the forehead and ending at the occiput. It became so severe in the recumbent posture, as upon going to bed, that sleep was impossible, and the night was passed in the chair. In this position sleep occurred. Pain next attacked the right side of the head, the first pain growing less, and at length ceasing. Lying on the right side was so painful that at length it could not be borne. Pressure on the right carotid gave temporary relief. Next the pain seized the neck, its seat being the first vertebra and extending to the occiput. Pressure on the vertebra named was attended by much increase of pain. Soon after this symptom, one or more muscles of the neck became rigid, drawing the head in various directions, as different muscles were affected. If no attempt were made to change the position of the head, very little pain was felt. In the spot in the neck in which most pain was felt, and especially upon pressure, there was an apparent fulness, or swelling, which had not been observed by Miss — before. The pulse, temperature, appetite and digestion were very little if any disturbed. At times so much was the relief that visits to neighbors were made, and a family dinner party attended by my patient. There was not the least disturbance of either of the special senses during this long disease, and the mind was as bright as ever, and the characteristic cheerfulness of the invalid was never wanting. There was, however, some wasting. Menstruation was regular and painless, but at times the discharge at the close of a period was offensive and of an unnatural color. Severe paroxysms of pain and general distress occurred. At these times the whole skin grew intensely red, as if suddenly attacked by some anomalous skin disease.

Miss — was unusually well three weeks before her death. She walked to a friend's house to meet other members of a family. She dined with them, eating a fair dinner, with an ordinary appetite. And this she had done before, again and again. The head troubles and contractions of neighboring muscles were so slight, if they existed at all, as to present no obstacles to her doing what others about her were doing. Her death was sudden. She had kept her bed for three weeks, having frequent attacks of pain in the head and neck, which were always relieved by ether.

Examination after death.—My friend Dr. Charles D. Homans conducted the examination. Emaciation was more striking than before death, as is commonly observed. The cranium was first opened. The external vessels of the brain were strongly marked, being filled with dark-colored blood. The cerebrum was remarkable for showing fewer bloody points than is commonly observed. The lateral ventricles were much enlarged, being distended with water. The septum lucidum was softened so as not to bear handling. The plexus choroides were almost colorless, softened and small. The opening to the fourth ventricle was very large. The weight of the disease was in the cerebellum. On its right side was a tumor of the size of a nutmeg, composed entirely of tuberculous matter. In its neighborhood the proper substance of the organ had a yellowish stain. In the left side of the cerebellum was a smaller tumor, of the character of the first. The lungs were everywhere studded with miliary tubercles. The heart was natural, and so was the alimentary canal. The spleen was enlarged and softened. The kidneys were natural. The uterus had undergone a complete tuberculous degeneration. It presented a solid mass of this matter without any distinction of cavities. Its peritoneal covering was externally smooth and natural. The ovaries also contained tuberculous matter.

In one of the elbows a tumor existed, of considerable surface, but slightly elevated. It was soft, but not fluctuating. It was painful, especially upon pressure. The skin was of natural color. Upon being cut into, a bloody purulent fluid was found at its bottom. The olecranon was deprived of its periosteum, and was rough, having sharp points projecting from it.

I do not remember any case like this, in my very long professional life. I certainly have not met with any one which in its complication of symptoms and the number of organs diseased, approaches it. It is not rare to find tubercle in different organs in the same subject. But in this it existed in many and remote ones. I have seen a great many cases of intermittent fever in our own Hospital, and under my own care, and in the Pennsylvania Hospital, of which I was a pupil nearly two years, but I remember no one in which the poison of that disease had so deeply affected its subject, and which probably was never removed. At last it showed itself, or seemed to do so, in the midst and pressure of other disease, which is among the most fatal, and which may have determined its paroxysmal character. The intervals, indeed, were not regular in time, but were marked, as we have seen, by a remarkable absence of the leading symptoms of the disease.

The clearness of the intellect, the cheerfulness, the patience so strikingly manifested, showed that the moral as well as the intellectual never lost its controlling power, and gave and preserved the strong interest which every one took in the sufferer. A question

arises, whether these facts may not be explained by the weight of the disease being so strikingly marked in the cerebellum. But then how much disease must have had its seat in the cerebrum, when we recollect how striking were its effects in the ventricles, both as it regards their great distension by water and the alterations in the structure of the septum and plexuses. Which one of these facts is alluded to, it must be recollected that water alone, and in great quantities, may be in the brain and the mental faculties be still manifested, as in chronic hydrocephalus. I well remember a case of which I saw the autopsy, when a student in Philadelphia, in which the cranium was by admeasurement as large as my own, and the brain, by the pressure of the water, was not more than half an inch thick, yet the mind had activity, especially in the acquisition of music. This was a female, eleven years old. She had been unable for years to raise her head.

Another fact in this history deserves notice. It is the extent which the disease occupied, or the various organs involved in it. Tubercular degeneration, or deposit, was in many. There is nothing remarkable in this. We examine a case of phthisis, and always look, and often successfully, for tubercles elsewhere than in the lungs. In the above case they were widely diffused, nay, the womb, with the exception of its peritoneal investment, was literally a mass of tubercle, having its white or whitish color, and turning out as if coarsely granulated, as it was. Still menstruation was perfectly regular; for of no function did I so carefully ask the history, and concerning which I can speak more confidently. It is true that in some of the latest periods a very foetid odor occurred at their close, and the color of the discharge was darker than natural. In other respects the secretion was natural. When looking at the entire change in the structure of the womb, the question could not but occur, "how could this organ in any way have performed this function?" We have parallel instances in other organs in which the presence of the most malignant diseases have not suspended natural functions. The stomach furnishes, of this, notable examples. There were tubercles in the ovaries. We have seen how numerous were they in the lungs. The spleen was enlarged and softened. The intermittent may account for these lesions. The bony tissue was involved, as was shown by the state of the olecranon.

PRACTICAL OBSERVATIONS ON THE INJURIOUS EFFECTS OF CHLOROFORM INHALATION DURING LABOR.

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EXAMINER IN DISEASES OF WOMEN AND CHILDREN, ROYAL COLLEGE
OF SURGEONS IN IRELAND, &c.

As, at the present time, the subject of chloroform inhalation is again *sub judice*, I feel it incumbent upon me to raise my voice

against its employment in midwifery, and to lay before my professional brethren my reasons for the adoption of such a course, which I sincerely trust shall have some weight with the unprejudiced, and which may, perchance, call the more serious attention of some, if not of all, of those now too deeply wedded to its use, to the dangerous, and too often fatal, results consequent thereon, in which, if I but even partially succeed, I shall consider myself well repaid.

From experience, repeated observation, and the published, as also the otherwise expressed opinions of those who agree, as well as of those who disagree with me upon the subject, I am firmly convinced that chloroform, when inhaled during labor, very fruitfully predisposes to hæmorrhage, puerperal inflammation, chest affections, and to other diseases detrimental to health and life, which it aggravates if given during their presence. It also lays the foundation of diseases to arise at a more distant period, and thus increases the mortality in childbed and subsequent thereto. I have known puerperal inflammation frequently to have followed its inhalation, and too often with a fatal result; in fact, some years since, when it was more fashionable, and was given with a more lavish hand, a great mortality obtained amongst the patients of some few men who administered it—so much so that a popular outcry was raised against its employment. In the majority of those cases puerperal fever was the cause of death, which, when thus raised, being, as I firmly believe, always infectious or otherwise communicable, became epidemicized, after which even those who wisely refused the drug, “charmed it never so sweetly,” were thus inadvertently, and, in some instances, hopelessly poisoned.

In support of these positions, I shall first refer to the several published Reports of the Dublin Lying-in Hospital. We find, on reference thereto, during the masterships of Drs. Collins and Johnson,* when chloroform was not inhaled, that the mortality was much less than during that of Dr. Shekleton,† when this “pernicious drug was used”—as thus:—In the first report are recorded 16,414 deliveries and 164 deaths, or 1 in 100; in the second, 6,634 deliveries and 65 deaths, or 1 in 102; whereas in the third, 13,748 deliveries are given, and 163 deaths, or 1 in 84!! But of these last 13,406 cases were not chloroformed, of which only 133 died, or 1 in 100, and of the remaining 342, who took the drug, 30 died, or 1 in 11!!! If, again, we examine the reported cases of chloroform administration by Simpson and Denham, we shall find that of 245 cases mentioned by the former, 5 died, or 1 in 49; and of 56 by the latter, 5 died, or 1 in 11!! And, by adding all these recorded cases together, we have a mortality on the whole of 1 in 16!!! By again consulting those reports, we perceive that in Dr. Collins’s

* By Drs. Hardy and M’Clintock.

† By Drs. Sinclair and Johnston.

mastership there occurred 97 cases of post partum inflammation, or 1 in 169; in Dr. Johnson's 62 cases, or 1 in 107; but in Dr. Shekleton's 150 cases, or 1 in 91. Of those 150 cases 20 followed upon chloroform inhalation, or 1 in 17!!! and in the remaining 130 cases, in which it was not employed, the average mortality was only 1 in 103. In Denham's report we find 4 cases, or 1 in 14; which, with all the recorded cases, strikes an average of 1 in $16\frac{1}{2}$!!!

We also find that, during Dr. Collins's mastership, puerperal convulsions proved fatal in the proportion of 1 in 6; whereas in that of Dr. Shekleton, when under chloroform, it amounted to 1 in 3!! and in Denham's cases to 2 in 3!!! or, on the whole, to 1 in $2\frac{2}{3}$!!!

It appears that, during Dr. Shekleton's tenure of office, post partum hæmorrhage occurred but once in every 257 cases when chloroform was not used; yet after its inhalation this complication was present in 1 of every 49 cases. In Dr. Denham's report it was present in 1 of every 19 cases; making, on the whole, an average occurrence of 1 in every $39\frac{1}{5}$ cases.

With respect to the mortality after perforation, the report of Drs. Hardy and M'Clintock shows 1 fatal case in every 6, and that of Drs. Sinclair and Johnston 1 in every 5; but if we go a little below the surface in the latter report, and examine into 99 cases of perforation, all of equal severity and danger, we shall discover that of the 29 cases in which chloroform was inhaled 9 died, or 1 in $3\frac{1}{4}$; puerperal inflammation occurred 10 times, or 1 in every 3 cases; and hæmorrhage followed in 3 cases, or 1 in every 10; whereas, of the 70 cases in which this drug was not employed, only 6 women died, or 1 in every 12; puerperal inflammation arose only in 3 cases, or 1 in every 23; and in no case did hæmorrhage occur.

Many have testified to the fact that uterine action has been lessened, and even caused to cease, by anæsthetics; as also that their effect on some is not commensurate with the quantity of the drug employed—as thus: a very large amount not having any effect upon some, whereas the inhalation of a very small dose, even of a few drops, has produced almost deep coma in others. Dr. Denham says:—"In some, if left to nature, the labor would probably have been completed in a somewhat shorter space of time. The advantages to be gained by chloroform in some cases will not be found an adequate compensation for the loss of power sustained in the muscles of animal and organic life; and, were we to continue its use, I do believe that the patients would remain undelivered for hours, or even days. The cases that apparently require it most—tedious and difficult labors—are those where it often appears to be injurious, by weakening the pains or relaxing the muscles of animal life." Rigby says:—"We meet with cases, every now and then, where chloroform undoubtedly retards labor, and in some cases likely to call for the use of the forceps."

Dr. Robert Lee mentions cases in which "uterine contractions were arrested, requiring the use of the forceps and perforator."

Tyler Smith "has seen chloroform stop labor midway."

In some of the cases recorded by Sinclair and Johnston uterine action was impaired.

My friend, Dr. Young, of Monaghan, says, in a letter to me:—"I believe chloroform in many instances to delay the labor, by causing the pains to come at longer intervals, and rendering the expulsive efforts of the patient less efficient, owing to her insensibility to suffering."

Merriman has mentioned a case in which "the uterus was so paralyzed that it failed to act afterwards."

Snow says:—"It is true that a full dose would, at any time, suspend uterine action for a few minutes, or as long as it might be kept up."

Ferguson says:—"Chloroform does not destroy muscular action, because, when under its influence, some expel urine and fæces." Now, from this, his doctrine must be that it increases muscular action; whereas, I take it that it paralyzes the sphincters.

On looking into Drs. Sinclair and Johnston's report, we find "two cases in which version was very difficult; and two others, in which that operation was impossible, where chloroform had been inhaled."

Murphy thus speaks:—"In a case of version, I never experienced so much difficulty in consequence of the strong contractions of the uterine fibres about the child."

Barnes remarks:—"In many cases it does not facilitate the operation of version, the uterus resisting the introduction of the hand."

Puerperal, hysterical and epileptic convulsions—mania, paralysis and insanity have followed on its use. Cases are recorded by Montgomery, Sinclair and Denham, in which puerperal convulsions occurred after its employment. Sinclair gives two cases of hysterical convulsions, in one of which "violent muscular action was induced; restlessness continued for a considerable time after the inhaler was removed."

Murphy states that, in "in dentistry, hysterical women have been seized with fits when under its influence."

Snow asserts that "hysterical patients, as soon as they lose their consciousness from the effects of the vapor, are sometimes attacked with a paroxysm of hysteria."

Dr. R. Lee says:—"Epilepsy has been so induced."

Sinclair records one case of epilepsy.

Snow and M. Fix have stated "that persons subject to epilepsy are likely to have a fit brought on by inhaling chloroform."

Ramsbotham "saw three cases of puerperal mania so caused. A friend of his also saw one similar case."

Sutherland "met three other cases, similarly produced."

Tyler Smith stated "that he had seen mania from its use."

Parks relates the case of a lady who had chloroform in her third labor. "She, after delivery, complained of violent pain in the head, became delirious, tore the nurse's gown and the bedclothes into pieces, and was perfectly maniacal."

Mr. Banner thus speaks:—"A patient became delirious, and continued so during the day and greater part of the night, after its use."

Haartman "saw a case of headache terminating in paralysis, caused by this drug."

In one of Dubois's published cases, numbness of the fingers, and in another the same condition of the legs, supervened, and had not subsided at the end of twenty-four hours.

In Denham's report I find one case of coma after chloroformic inhalation.

Dr. R. Lee says "that insanity has followed on its employment; that dangerous and fatal peritonitis and phlebitis have been caused by its inhalation."

Two or three of Denham's cases were seized with rigors; and Lee mentions "others with dangerous fits of syncope;" and in this he is borne out by the following, which I find recorded amongst Denham's cases:—"While inhaling, the pulse became very weak, and she gave no signs of consciousness; and, immediately on the birth of the child, the respiration of the patient ceased, and the pulse became imperceptible; the application of cold water to the face soon revived her, and she went on favorably for some days; but diarrhœa, with extensive inflammation of the mucous membrane of the ileum, set in, and she died on the fourteenth day."

Sinclair and Johnston record nearly a similar case, as thus:—"The pulse suddenly became imperceptible, and respiration appeared to have ceased. She subsequently died of phlebitis." And they give another in which collapse occurred, and she died with symptoms of phlebitis.

Tyler Smith says "that he knew two ladies in whom a few drops of chloroform, at any time, would produce repeated fainting."

I am acquainted with a lady who, some time since, had a very severe attack of syncope from taking only five drops of chloroform in a draught.

Dr. Barnes stated—"That he had himself given chloroform to facilitate the extraction of an adherent placenta, and had witnessed such exceeding prostration for eight hours afterwards, as to make him, and another practitioner who assisted him, apprehensive of the instant death of the patient."

Many are of opinion that the inhalation of chloroform predisposes to laceration of the perinæum; indeed, some of the published cases would tend to favor this idea. In Sinclair and Johnston's report, we find that, in the recorded cases, it occurred once in 27 cases;

and when not employed, the accident happened only once in 93 cases. In the same work we find three cases of chest affection aggravated by this means, two of which succumbed. Dr. Ringland, one of the Masters of the Coombe Lying-in Hospital, in reply to a letter from me, thus writes:—

“I have seen chloroform frequently used in puerperal convulsions, and have used it myself in connection with the practice of the Coombe Lying-in Hospital; and the conclusion I have come to is, that I will never again use it, or sanction its use, in puerperal convulsions. I have observed that, however satisfactory its employment may appear at the time, it has been almost invariably followed by bronchitis, within about 48 hours, and that the patients have sunk rapidly under the latter affection. I have seen this so frequently that I cannot but look on chloroform and bronchitis, under the circumstances I have named, as cause and effect; and the mortality from the subsequent bronchitis, as the actual result of the employment of chloroform.”

Ramsbotham relates the case of “a lady who was seized with dyspnœa, with excessive lividity of the face, and all the signs of engorgement of the lungs and heart, and died in convulsions six hours after.”

Murphy has published a case nearly similar; he also admits “that vomiting, nausea and headache sometimes follow on its use.” Nausea and vomiting were also present in one of Denham’s cases.

Rigby states, “that intense headache, and even vomiting, are consequences of its use.”

I occasionally use a blistering fluid which contains chloroform, and if I am not very cautious during the *minute* I am employing it, I am certain to suffer from sick headache for the remainder of the day. Not long since, severe vomiting followed upon the inhalation of chloroform, during the operation for vesico-vaginal fistula, in one of our city hospitals; and, in spite of all remedies, lasted for six days. It is needless to say that the operation, in consequence thereof, failed. I have so often seen this effect of the drug that I always object to its use in operations requiring the employment of sutures upon the female genitals. Thus it is evident that such a complication existing after labor would, like severe cough, predispose our patient to inflammation in parts, for whose restoration to health absolute rest is required.

Parks gives the case of a “lady in whom, after chloroform inhalation, flooding came on to a fearful extent, and incessant sickness. He managed to extract the placenta; and, owing to the feeble contractions of the uterus (and this latter condition, he is confident, it often produces), he was kept grasping it for four or five hours; the vomiting continued for eight hours without intermission; the headache remained for weeks.”

Tyler Smith “believed that post partum hæmorrhage and re-

tention of the placenta occurred more frequently after its use than without it."

Montgomery was of opinion "that it predisposes to retained placenta and hæmorrhage."

My friend Dr. Young, before alluded to, says:—"I have blamed it for causing a longer detention of the placenta, and for occasional after-hæmorrhage, owing to the lazy and inefficient contraction of the uterus. After its use opiates have very little effect; even very decided doses, in any form, have not been followed by that tranquillity I had hoped for, in that violent pain which I have so often found to follow operation when chloroform had been used."

Murphy speaks of making pressure on the uterus to expel the placenta, in two cases, after chloroform.

Denham had one case of retained placenta after its employment. He says:—"We had no reason to think that chloroform predisposed to hæmorrhage; on the contrary, we were impressed with the idea that the number of hæmorrhagic cases where it had been given were rather below than above the average in ordinary practice." This statement does not accord with my experience, and I should be sorry to think that hæmorrhage so frequently complicated labor, "in ordinary practice," as once in every *nineteen cases*, as shown by his report. Some of the loudest advocates for chloroform inhalation in labor have, in order to counteract its deleterious effects upon uterine action, recommended the co-administration of ergot of rye; which practice reminds me of the astute physician who, to be sure to hit his patient's disease, prescribed for him the combination of a stimulant with a sedative, and a purgative with a tonic. But I hold there is a more serious objection than this to the wholesale use of ergot; for we cannot conceal from ourselves the fact that its administration, even in appropriate cases, is not always innocuous. Some years since the following case came under my knowledge:—Ergot was given to an unmarried lady to facilitate the birth of her first child, before her father, who was ignorant of her condition, had returned home to his dinner. The child was rapidly expelled, but sloughing, to a frightful amount, followed, and placed her life in jeopardy for days. And who has not seen the child sacrificed by it? For this reason, it has now-a-days become almost an axiom **not to leave a female undelivered for a longer period than two hours after its employment.** I believe that ergot of rye, in some cases, causes incarceration of the placenta and hæmorrhage, and in others, sinks the patient; the uterus, after its use, often remains large and uncontracted for days, which state not unfrequently terminates in imperfect involution of the uterus and its consequences; which last effect chloroform also produces. Many believe that ergot, besides destroying the child at the time of its birth, acts sometimes otherwise deleteriously upon it, by inducing disease—to do so at a shorter or longer subsequent period—or to reduce it to a state to which death would be preferable.

Dr. Catlet, in the 57th volume of the *Edinburgh Medical Journal*, page 83, states that ergot of rye, when given during labor, causes puerperal convulsions, hour-glass contraction of the uterus, and infantile hydrocephalus. Amongst the cases of the last, I find one in which "symptoms of meningeal inflammation were developed on the 19th day, and the child died in convulsions, with coma, on the second day following." And in another, "the symptoms of cerebral derangement set in suddenly on the 21st day, and the child died on the third day of the attack, in convulsions."

Dr. Beatty, in a paper "On the Influence of Ergot of Rye on the Fœtus in Utero," published in the 25th volume of the *Dublin Medical Journal*, page 201, amongst other cases after its use in labor, gives the following:—"Case 7. The child had convulsions for three days after its birth." "Case 9. The child had convulsions for 48 hours after birth. They then subsided, but left the child in a state resembling paralysis, with occasionally a convulsive motion of the muscles of the face and limbs, and fixed strabismus. No treatment seemed to have any effect upon this condition. Twenty days after its birth the following report was taken:—"This child has remained in a state of insensibility up to the present time; the strabismus has lately disappeared, but it seldom opens its eyes. The limbs are apparently powerless. It makes no effort to suck, but it swallows breast-milk with difficulty when put into its mouth. The difficulty is increasing; the bowels act naturally." In this state the child lingered on until the 25th day, when it died." Case 12. This child he first saw when three years old; "it then had an idiotic countenance, and was never free from spasms and palsy, commencing from its birth."

Cusack and others have also testified to the deleterious effects of this drug upon the cerebro-spinal system of the infant.

Dr. Snow says that "chloroform is a volatile spirit, and that half an hour after its application no traces of it could be found in the system."

Now, in refutation of this assertion, Dr. Ramsbotham mentions the case of "a lady who, for four or five days after its use, could not get rid of the smell."

Dr. Aveling speaks of "a lady who had chloroform in three labors, all of whose children, when unwell, had for years afterwards the smell distinctly off their breaths. This lady would never take it again."

In a monograph by me, on "Blistering the Os and Cervix Uteri," published in the May number of the *Dublin Quarterly Journal* of the year 1857, cases are mentioned of females having had the smell of chloroform off their breaths, evident to their friends as well as to themselves, and of others having experienced its taste, lasting, in both instances, for days after the blistering fluid containing that drug had been employed.

When sulphuric ether was first employed as an anæsthetic in this country, a medical student inhaled it as an experiment in this city, and the smell of it was evident off his breath, to any one who spoke with him, for nearly a week after its employment.

Dr. Jackson (an American) thus writes upon the subject:—"When chloroform is inhaled into the lungs, the oxygen is abstracted from the blood, and, combining with the formyle, makes formic acid, while the chlorine combines with the blood as a substitute for oxygen. Thus a portion of the blood becomes chemically changed, disorganized, and rendered unfit for its vital functions. I have now a phial of blood, taken from a young lady killed by the inhalation of pure chloroform, before me, it having been kept in my office, exposed to temperatures from the freezing point to above 80°, for more than six years, and yet it has not decomposed, nor has a single blood-globule settled to the bottom of the phial, nor has the color changed in the least." It has been denied that females, when under the influence of chloroform, make use of improper and indecent language. Now, I never shall forget the case of a lady I saw, in consultation, a couple of years ago, with an hospital surgeon, who, when chloroformed, threw her arms around him in the most endearing manner, and made use of language which would make her blush if in her senses, of which, I hope sincerely, she was never made cognizant.

Denham says:—"There are cases in which chloroform appeared to be not only useless, but, when persevered in, positively injurious." And again:—"In giving chloroform we incur a certain amount of present danger, and perchance of remote ill effects."

Dr. Robert Lee, in reply to a letter from me, says:—"I could give you a great number of cases in which chloroform was not only injurious, but fatal."

Dr. Gream said:—"He agreed with Dr. Lee in saying that we were quite unacquainted with *one tenth* of the evil effects which had resulted from the use of chloroform, particularly in Scotland."

Dr. Duncan, in a letter to Dr. Lee, thus writes:—"Your case of chloroform death in midwifery is, to the best of my belief, not the only one in Scotland. I was called, too late, to a case which died suddenly while taking it in *small quantity*."

Dr. Campbell, of Ayrshire, records another case of death in labor from its use. Mr. Carter says "that in two cases its effects would appear to have been pernicious."

Prof. Faye, of Christiana, has also recorded a fatal case of labor after its use.

Dr. Rogers said "he knew of a case where death took place apparently in consequence of its use in midwifery."

Dr. Barnes says:—"In ordinary forceps cases chloroform certainly is not required, either to facilitate the operation or to allay pain." Indeed by its use in such cases we lose one very valuable indication

by our patient's want of sensibility. Dr. Chas. Kidd evidently does not consider its use devoid of danger, as he advises the physician who administers it "*always* to carry in his pocket a portable galvanic chain or battery." Drs. Kidd and Richardson are reported as having seen many deaths after its employment; and the former gentleman "to have seen about 300 cases restored to life or rescued after they had been pronounced dead." I would ask, in the name of common sense, is it within the bounds of reason to believe that a medicine can be employed innocuously with the pregnant female, when confessedly its use has often been followed, not only by dangerous, but even fatal results under other circumstances, as testified to by Drs. Kidd and Richardson, amongst many others, as also by almost every periodical we take up? Dr. Snow, in speaking of his imagined advantage of chloroform over opium in version cases, thus writes:—"If 50 or 60 drops of laudanum were given, the patient remained under its influence, more or less, for 48 hours." Now, in this I must join issue with the doctor, for I am, and have been for years, in the habit of giving such, and even much larger doses in those cases, as also in hæmorrhage, and I never yet saw such a result, or one at all approaching to it. We have been told that across the Tweed death has not, in any instance, followed upon the inhalation of chloroform in labor, whereas some have been since recorded; and not very long ago I was informed, by more than one physician practising in Scotland, that many have so occurred there, but not made public, yet well known to the profession. It is also a fact that some who have written favorably on its use have since changed their opinions, but have not said so publicly; and some give it only in name, or as has been styled *à la Reine*. The following is so apposite here that I cannot avoid quoting it from Denham:—"That chloroform may be, and sometimes is, given for the purpose of amusing patients, and making them believe that they are saved from a vast amount of pain, when in reality they have scarcely inhaled a single breath of it, I doubt not."

We very frequently see better and safer recoveries after tedious and painful than after rapid and painless labors, and the latter are not the less likely to be seriously complicated; indeed, in former days, when, happy for the parturient female, chloroform was unknown, and when meddlesome midwifery was strongly reprobated, such an opinion was entertained. *Apròpos*, I have two patients—one the mother of five, the other of four children—who always have rapid and, I may say, painless labors, but which are invariably followed by alarming hæmorrhage, by no means an unusual occurrence, as already shown, after chloroform inhalation, besides being admittedly a fruitful predisposing cause of puerperal inflammation. In the employment of anæsthetic agents during instrumental delivery we deprive ourselves of a very valuable indication in the loss of our patient's sense of feeling, which the following cases forcibly il-

lustrate; for had such means been resorted to in either, it must be evident to all, even to the most sceptical, that the consequences should have been most disastrous:—Mrs. D. had a very tedious labor with her first child. When about 36 hours in labor, the os uteri was found thinned and spread tightly over the head of the child, dilated to about the size of a shilling, but directed obliquely backwards and upwards, so located as only to be found by the well-educated and practised finger. Her medical attendant, having failed to discover the real state of matters, took it for granted that he only felt the head, which had passed through the fully-dilated os, and proceeded, without further delay, to deliver her with the forceps; but from the great pain which she experienced from the application of its blades on the head so clothed, he was obliged to desist; and, being much alarmed, he sought for further assistance, after which the nature of the case was discovered, when, of course, all interference was given over for the time, but eventually destructive instruments were had recourse to. The other was the case of Mrs. M., very similar to the former; but the perforator was the instrument employed, which the medical gentleman pushed into the cervix expanded over the head, when her piercing cries and some slight bleeding caused him to look more narrowly into the state of the parts. She was, however, afterwards naturally delivered, and had a good recovery.

At page 333 of the *Dublin Quarterly Journal of Medical Science*, for May, 1849, in the late Dr. Montgomery's essay upon "The Indiscriminate Administration of Anæsthetic Agents in Midwifery," we find a somewhat similar case recorded, in which the medical man mistook the attenuated anterior section of the cervix uteri for the membranes, which he was endeavoring to perforate with his nail, when the lady's cries arrested him.

Even though it were possible to divest chloroform of its dangers, it does not, as has been already shown, always produce the advantages expected from its use, as in version; for indeed not a few instances have been recorded of its having been an impediment to this operation, which in some cases could not be overcome. I cannot see any advantage derivable from the inhalation of this poisonous drug in cases of retained placenta, as generally such a complication is caused by inaction of the uterus; and our object, therefore, ought to be to induce uterine action, surely not further to paralyze it. Such treatment reminds me of a case which I was called to see 20 years ago. The placenta had been retained for six hours, and some draining was going on. The lady's medical adviser was looking on very complacently, and dosing her with tartar emetic. Of course there was not any difficulty in the extraction; but puerperal inflammation set in on the second day, from which she eventually but slowly recovered. Every practical man hails after-pains as salutary, especially after quick and painless labors, and would not

dream of interfering with their wholesome action, unless very severe, for some hours after delivery; yet those misguided chloroformists think nothing of interfering with that safe action at times when the advent of hæmorrhage would complicate matters more seriously. The other objections to its use at other times, under certain circumstances, are equally admissible here. I think I have now demonstrated that chloroform inhalation is far from being a safe remedy in childbed, and should not then be employed.—*Dublin Quarterly Journal of Medical Science*, May, 1863.

A CHEAP SPIROMETER

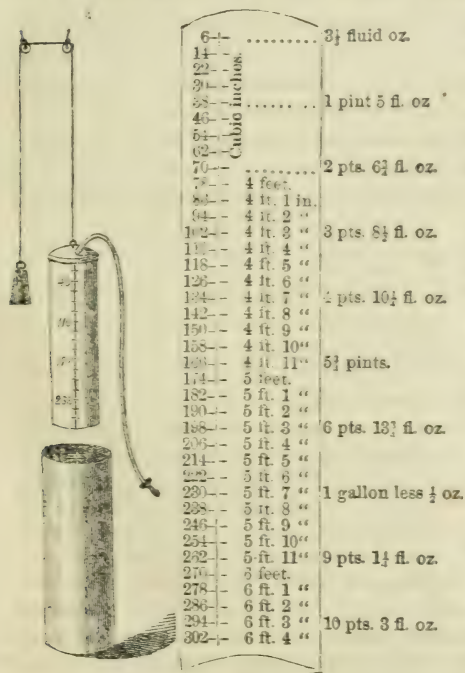
By W. E. BOWMAN, M.D.

A CHEAP spirometer may readily be made from two tin vessels, similar in shape to the ones figured in the accompanying wood-cut; the one should be about 20 inches long and 6 inches in diameter, and the other 18 inches long and 5 inches in diameter. The latter may be graduated into spaces of eight cubic inches by means of our ordinary gallon measure, which is the old wine measure of Great Brit-

tain and the one that is adopted by the United States Pharmacopœia; it consists, as everybody knows, of 8 pints of 16 ounces each, the ounce measuring 1.8 cubic inches.

Having placed the smaller vessel perfectly upright, measure into it a gallon of water less half an ounce, and with a rule ascertain the precise distance from the surface of the liquid to the brim of the vessel, then placing this measure outside of the tin, mark the height of the water as 230 cubic inches. In a similar manner with half a gallon and $10\frac{1}{2}$ fluid ounces, mark 134 cubic inches.

Next divide the space between these two points into



12 equal parts, which will be measures of 8 cubic inches each, and with the compasses continue the graduation upwards and downwards, placing the figures on the inverted vessel as here shown. If

its diameter be everywhere alike, the measure must be correct; its accuracy, however, may be readily tested by the annexed subdivisions of the same measure. The pulleys and counterpoise may now be adjusted to the graduated tin.

Next fill the larger vessel with water, so that the smaller may be just covered when inserted as low as possible into it, and mark the height of the water on the inside of the larger tin. Then raise the small one gently until the 174 cubic inch line appears even with the surface of the water, and make a second mark of its level. Finally, put the third graduation in the large tin when the smaller is raised completely out of it.

Lastly, affix two or three feet of flexible tubing and a mouth-piece to the top of the small tin, and the spirometer will be ready for use.

The graduation inside of the larger vessel is to detect and obviate any difference in the level of the water within and outside of the rising vessel, which, after receiving the breath, should be depressed until the water is at its proper level, the tube being closed by the fingers during the adjustment and reading off.

With this scale as a guide, the York Glass Company, of England, has made me a beautiful spirometer of this form entirely of glass, and correctly graduated into cubic inches. It differs somewhat from this one in having a perforated glass stopper in the centre, to which the silk-covered tubing is attached; and also in having two cords, one each side of the stopper, and four pulleys, which prevent it from turning. Thus arranged and mounted on handsome brackets, apart from its usefulness in ascertaining the presence and progress of phthisis, it forms an elegant addition to a surgery.—*Canada Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 6, 1863.

THE MEDICAL PROFESSION IN BOSTON.—This is the first number of a new volume of the Boston Medical and Surgical Journal, and we who are responsible for its character and appearance and who know the past, can but look forward into the future with some fear for the uncertain state of our scientific and literary finances. We take this opportunity, therefore, of saying plainly to the medical profession of this city that they certainly fall short of the reputation which attaches to the name of Boston in other States and foreign countries. If she has made for herself a name, which is second to none, in literature and science, we as common citizens and heirs must thank the astronomer, the man of letters, the historian, the naturalist, the jurist and the orator, but, we shame to say it, we dare not claim for the learned profession of medicine its proper share of credit. Other cities, both in other times and at the present day, which have made them-

selves known in history and to our generation for learning, have owed their fame in a great degree to the noble disciples of medicine dwelling within them, and emperors and kings are to-day rewarding by titles and seats in council those masters of our art who are making their chief cities lights of science to all the world. That the capital of New England is not honored this day as much for distinguished physicians as for her well-known men in the sister professions, is our own fault alone, and the reason for it, alas! is that we ourselves do not sufficiently honor our calling. We are indolent, and we care only for gaining patients and riches. We labor to acquire position and comforts, but how few of us are really students, and care more personally for the advancement of science than for our own "getting on" in the world. How seldom has a Boston physician made a systematic series of investigations in physiology, in chemistry, in therapeutics or in any of the less practical studies connected with our profession, or prepared a connected work of any kind! It may be said that it is better to write nothing than to make up books, as some of our brothers in other cities do; but their attempts, even if wanting the merit of originality, indicate at least life and action, and therefore are better than our sluggishness, and moreover from this life have sprung a few real books, which show that the science of medicine is not entirely dead in our country. Our best known physicians are famous for the amount of their income and the number of visits made each day, and there seems to be no higher ambition than this among us. How fortunate that we live at home, and how different is a medical reputation in other countries. The celebrated physician there first makes for himself a name by incessant toil and self-sacrifice. He cares neither for society, for appearances, for comfort, only for science, and then in after years come riches and honors as well deserved rewards.

We would not have our meaning misinterpreted. We believe that those among us who are so deservedly popular as practitioners, are in every way worthy of their success. It is the resting satisfied with success in practice, and making this our only aim, which is so fatal to the progress of medicine with us. There are other duties resting upon the physician, which he is bound to fulfil, if he has a proper respect for the future welfare of his profession. It is not right that the man grown old in wisdom should pass away and leave no utterance of the results of his vast experience, or that the hard-working man, in his full powers, should keep silent now, thinking that some day may bring him leisure to make known to others the lessons he is daily learning. If it is impossible for one in the full practice of his profession to turn his attention to the practical pursuit of original science, and if it is to the younger man that we must look for the resurrection and nobler development of our art among us, we still may claim from the former a record of their labors as a debt due the calling in which they have been so successful. As we now are, our medical societies are almost deserted, and an animated discussion or scientific debate, such as take place in foreign societies, are entirely unknown and unexpected. A few gentlemen now and then offer a verbal report of any remarkable case which may occur in their practice, and with this exception the medical profession of Boston is almost entirely voiceless, and, we had almost said, spiritless. Living in a city which supports the only two literary magazines, a monthly and a quarterly, in the country, worthy

of a name, it does scarcely anything to sustain the only public representative of itself in New England. The *Boston Medical and Surgical Journal* might as well be called by any other name, for by far the larger proportion of its contributors are not members of our community. To these gentlemen, and to those among us, mostly the younger men, from whom we have the least right to expect assistance in our efforts, so difficult in these times, to sustain the interests of our profession, we offer our thanks, and hope that their words may grace our pages in many future volumes. To the profession of this city in general, we shall look hereafter for a more generous contribution as a sign of that earnest reformation, which is so essential to our very vitality.

COSMETICS.—Mr. Reveil has been examining and anatomising a very large number of French cosmetics of various kinds, and has communicated the result of his investigation in the *Annales d'Hygiène*.

Among the toilet soaps, several of those labelled *Savon de laitue*, *de suc de laitue*, *de thridace*, *de lactucarium*, and advertised as having been approved by the Académie de Médecine de Paris, or by the Faculté de Médecine de Paris, contain none of the medicinal substances which their names would lead to suppose. They are all colored green with chromic oxyd; not a dangerous color, however.

The manner in which the poor are cheated by "cheap soaps" is, in Paris, understood to perfection. These vile soaps of a brown, red or greenish color, besides a large quantity of "water of adulteration," contain up to thirty p. c. of insoluble matter, chalk or plaster, while the fat employed must have been of the vilest description, and causes the soap to undergo a rapid putrefaction. The samples examined contained up to five and a half p. c. of nitrogen.

Mr. Reveil calls attention to a cause of certain exanthematous diseases from the toilet vinegars applied after shaving. The acid of these liquids, by decomposing the soap on the skin, causes the insoluble fatty acid to precipitate and become fastened on the cuticle, to turn rancid and thus cause irritation.

Hair-dyes.—Certain vegetable powders are used by the Turks and Persians for this purpose, which are applied, one after the other, to produce various hues. One of these powders, which is applied in the first instance, and was found to be rich in tannin, is supposed to be *henna* (*Lawsonia inermis*); the powder for secondary application is probably obtained from an indigoferous plant.

A hair-dye, styled *Eau d'Afrique*, contained in three vials: 1, a solution of about three parts of nitrate of silver in one hundred parts of water; 2, a solution of eight parts of dry sulphuret of sodium in one hundred parts of water; 3, a solution of nitrate of silver of the same strength as the first in some aromatic water.

An *Eau de la Floride*, de G., largely advertised as a purely vegetable dye, was a mixture of sulphur, sugar of lead, and rose-water.

Another preparation contained in three vials: 1, a solution of nitrate of silver and sulphate of copper in ammonia; 2, a solution of sulphuret of sodium; 3, *l'eau à détacher*, viz., a solution of cyanuret of potassium.

Tincture Américaine pour la barbe.—Three vials and a brush. The first holds an alcoholic solution of gallic acid; the second, an ammoniacal solution of nitrate of silver (9 p. c.); the third, a solution of officinal sulphuret of potassium.

Selenite perfectionne, de M., appears to be an alkaline solution of acetate and nitrate of lead.

Le Chromacome de Monsieur W.—Mr. W. “having observed the admirable blackness which the hair of the Chinese ladies possesses, and having had the opportunities of satisfying himself that their chromacome was composed of entirely inoffensive vegetables, offers it now to the public, who have hitherto been unable to procure any but the most dangerous compounds.” This is a preparation of pyrogallic acid and ammoniacal nitrate of silver. It is accompanied by certificates from three M.D.’s belonging to the *Société des Sciences Industrielles*, of which they are no doubt chevaliers.

The *Eau tonique, de C.*, has the merit of being nothing but an aromatized solution of tannin.—*Am. Druggists' Circular and Chem. Gaz.*

DECISION OF THE COMMISSIONER OF INTERNAL REVENUE WITH REGARD TO THE INCOME TAX TO BE PAID BY PHYSICIANS.—We would direct the attention of our readers to the following letter from the Commissioner of Internal Revenue to a Committee of the Medical Association of the District of Columbia, in relation to professional income:—

} TREASURY DEPARTMENT, OFFICE OF INTERNAL REVENUE,
WASHINGTON, June 11th, 1863.

GENTLEMEN,—Your letter of this date has been received, and contents noted. It is asked whether an assessment for Income Tax is to be made upon collections during the year 1862, for professional services rendered during that year and previous years, and whether an estimate of unrealized or contingent income due for services rendered in that year, ought to be included? I answer, that the assessment should be made upon all collections during the year 1862, without regard to whether the services were rendered during that or previous years. If any profits made during that year and uncollected, remain uncollected when they might have been readily realized, and with a view merely to avoid the assessment of the tax, they are to be considered as collected, and assessed accordingly; for no evasion of the liability of the tax-payer of his duty under the law should be allowed to profit him. But merely contingent profits, uncollected, the sum not ascertained, remaining open for adjustment, are not liable to assessment.

2d. As to “expenses necessarily incurred in carrying on any trade, business or profession,” physicians cannot be allowed the wear and tear of horses, carriages and harness, any more than they can of their own constitutions, or of their health, necessarily injured in the practice of their vocation; but any incidental expenses, such as the feeding of horses, hire of servants, and such like, are to be deducted from their income.

Very respectfully,

JOSEPH J. LEWIS, *Commissioner.*

DR. JOULE’S NEW SENSITIVE THERMOMETER.—At the last meeting of the Manchester Philosophical Society, Dr. Joule described a new thermometer of such exquisite sensibility as to be capable of being affected by the heat radiated from the moon. It consists of a glass tube, closed at both ends, two feet in length by four inches in diameter, divided longitudinally by a blackened pasteboard diaphragm, extending to within an inch of the two ends. In the upper space so left, a piece of magnetized sewing needle, furnished with an index, is suspended by a single filament of silk.

It is evident that the slightest increase of temperature on one side will occasion an expansion of the air on that side, which will consequently ascend, and, after passing across and affecting the index, will descend on the other side. So exquisitely delicate is this instrument, that it indicates the heat given out by a pint of warm water at a distance of three yards, and it is also able to detect the heat radiated by the moon; for as a beam of moonlight admitted through an aperture in a shutter was allowed to pass across the instrument, the needle was deflected several degrees, first to one side and then to the other. This instrument, at once so simple and so delicate, promises to be of extreme use in many thermometrical and meteorological experiments, and, in general, in all sciences where the observation of slight difference of temperature is of importance.—*London Chemist and Druggist*.

DR. LEONARD J. SANFORD has been appointed Professor of Anatomy and Physiology in the Medical Institution of Yale College, to fill the place lately vacated by the lamented death of Prof. Charles Hooker, of New Haven.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 1st, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	63	57	125
Ave. mortality of corresponding weeks for ten years, 1853—1863,	48.6	50.6	99.2
Average corrected to increased population	00	00	109.30
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
13	3	1	0	0	7	2	30

TO CORRESPONDENTS.—A paper on the Dressing of Gun-shot Wounds, from the Surgeon-General's Office, Washington, was received too late for insertion this week.

PAMPHLETS RECEIVED.—What is the Modus Operandi of Medicines? By John O'Reilly, F.R.C.S.I.—Annual Report of the Trustees of the Hospital for the Insane of the State of Wisconsin, for the year ending Sept. 30, 1862.—The Progress of Ophthalmic Surgery from the invention of the Ophthalmoscope up to the present time. By John Z. Laurence.—Consolidated Statement of Gun-shot Wounds. Surgeon-General's Office.

JOURNALS RECEIVED.—Chicago Medical Journal, July, 1863.—Sanitary Reporter, Vol. i., Nos. 3, 4, 5, 6.—Medical and Surgical Reporter, Vol. x., Nos. 9, 10, 11, 12.—Medical News and Library, August, 1863.—Pacific Medical and Surgical Journal, June, 1863.—American Medical Times, Vol. vii., Nos. 2, 3, 4, 5.—Chemist and Druggist, Vol. iv., No. 47.—Medical Record of Australia, Vol. iii., Nos. 3, 4.—Cincinnati Lancet and Observer, July, 1863.—Chicago Medical Examiner, Vol. iv., Nos. 5 and 6.—London Lancet, June 6, 13, 20, 27, 1863.—Dental Cosmos, July, 1863.—Canada Lancet, Vol. i., Nos. 4, 5.—Eclectic Medical Journal, July, 1863.—Dental Register of the West, June, 1863.—Journal de Médecine de Bordeaux, June, 1863.—American Journal of Pharmacy, July, 1863.

DIED.—In New York city, suddenly, of apoplexy, July 30, Dr. James Stewart, aged 50.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 1st, 125. Males, 63—Females, 57.—Accident, 6—apoplexy, 2—inflammation of the bowels, 2—disease of the brain, 3—inflammation of the brain, 2—bronchitis, 1—cancer, 2—cholera, 1—cholera infantum, 30—consumption, 13—convulsions, 2—croup, 3—cystitis, 2—diarrhoea, 8—diphtheria, 3—dropsy of the brain, 3—drowned, 2—dysentery, 7—bilious fever, 1—typhoid fever, 2—gun-shot wound, 2—disease of the heart, 3—infantile disease, 3—disease of the liver, 2—marasmus, 4—peritonitis, 1—premature birth, 2—puerperal disease, 1—rheumatism, 1—scarlatina, 1—scrofula, 1—stomatitis, 1—teething, 1—thrush, 1—unknown, 6.

Under 5 years of age, 73—between 5 and 20 years, 11—between 20 and 40 years, 19—between 40 and 60 years, 13—above 60 years, 9. Born in the United States, 96—Ireland, 25—other places, 4.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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THURSDAY, AUGUST 13, 1863.

No. 2.

CASE OF INFLAMMATION OF THE APPENDIX CÆCI.

By JOHN P. REYNOLDS, M.D., Boston.

[Communicated for the Boston Medical and Surgical Journal.]

X. P., an unmarried girl, 18 years old, was brought to my office by her mother, on the 31st day of October, 1862. She was evidently suffering and feeble, was somewhat bent forward in standing, walked with difficulty, and complained of pain in the bowels, which she ascribed to her not having been unwell for five weeks.

Examining her externally, I found in the region of the ileo-cæcal valve a circumscribed tumor, hard, deeply placed, rather larger than a hen's egg. She rode home and was put on her back; and at my subsequent visits, I obtained the following history:—

At about the middle of the month of August preceding, while staying at her sister's house in a neighboring seaside town, she ate very largely of wild cherries, swallowing the stones, and soon after, whortleberries and milk. There followed that night a severe attack, in regard to which no very accurate information can be obtained. She vomited repeatedly, had excruciating pain in the bowels and was not able to obtain any evacuation. Three or four injections had at length the desired effect, and gave her much relief; as to the character of the discharges, nothing can now be learned. The next day she had sufficiently recovered to be able to walk two miles, though against the earnest remonstrances of her friends, and with great difficulty. From this time, for many weeks, she had recurring attacks of abdominal pain. She returned to Boston in the latter part of September. The night before her return she had several severe chills; the following morning she was free from pain while in the horizontal position, but on attempting to rise, she fainted and vomited. During the few weeks following her return, she went to her place of work as usual. She often made complaint; but as when previously in perfect health, she had been the victim of many imaginary ailments, and as it was noticed that she ate with excellent appetite, no great attention was paid to her symptoms till the time of her visit to me.

She was of small size, still appearing a mere child; feebly built, with brown hair tinged with red, and long, soft eyelashes. Her father lived and died an intemperate man. A sister, next older than she, is in one of the State lunatic asylums, in a state of hopeless dementia.

She first menstruated before she was 12 years old, and from that time the function was performed with entire regularity. She had never any pain during the period. She was commonly unwell for a week. After the illness in August, she menstruated once at the proper period, but imperfectly, and only for two or three days. In the next month the function was in all respects well performed. When she came to see me first, she had passed five weeks without menstruating, and without any menstrual nîsus. To complete this portion of the history, I will here add, that one week later, after six weeks, without special treatment, she was regularly unwell, and that after that time, for a period of seven months, there was no return.

She had been habitually a somewhat costive person. For a week before her first visit to me, there had been daily from one to three loose discharges; slight remedies soon corrected this symptom, and afterwards, either by the efforts of nature, or with the aid at times of the mildest laxatives, there were regular and entirely healthy dejections. There was never any important pain during micturition or defæcation.

The tumor, which has been heretofore described as it appeared on the last day of October, continued, without any noticeable incident, to increase, during the next six weeks, in extent and prominence, till on the 11th day of December last, it occupied the whole lower abdomen, and extended about once inch above the umbilicus. It was exceedingly tense; to use the patient's expression during the last few days of this period, she "felt all the time as if she should burst." Seen in the horizontal position, the part of the abdomen occupied by the tumor appeared to be everywhere raised from one and a half to two inches above the ordinary level. The enlarged abdomen bore no resemblance to that of pregnancy, being much flatter and also more uniformly resisting and dense than that of a woman pregnant at six months, the period most nearly approaching it in appearance. During the greater part of the six weeks now under consideration, there was no great disturbance of the pulse. Till very near its close, sleep could be procured by moderate doses of opiates. The appetite gradually failed, and for nearly three weeks previous to the 11th of December, she could hardly take any other nourishment than Dublin porter, of which she drank a pint daily with relish. The pain was sometimes relieved by anodyne external applications, and at other times by those of a stimulating character.

A few days before the 11th of December there was an evident effort at pointing, nearly in the median line, about an inch and a half below

the umbilicus. On that day, with the assistance of Dr. Wm. Read, who had kindly seen her often in consultation, I made an opening at the point indicated, of nearly two inches in length, giving issue to a violent jet of thin greenish pus, in quantity, as nearly as we could judge, more than a pint. With it there came perhaps a teaspoonful of minute grains, brownish in color, which, spread upon a cloth for intended examination by the microscope, and neglected, had in a few hours nearly disappeared, leaving only a faint yellow stain. Nearly three months later similar grains were once observed by the mother. The bystanders were conscious of a very offensive odor at the time of the operations, which had nearly if not quite disappeared on the following day. Dr. Read, who stood near, thought the odor "overpoweringly fecal." I had no distinct perception of its having that character.

From the last date till the 13th day of March, there was a constant purulent discharge from the wound, slight in amount, not unusually offensive. With the two exceptions above mentioned, there was not during this period any appearance even suggesting the presence of fecal matter. The patient soon became again able to sleep and to eat. There was for a short time slight irritability of the bladder, especially at night, and she often complained of a pain on attempting to rise or move, which was referred to the neighborhood of Poupert's ligament on the right side, and extended down the course of the crural nerve. There were days when, in trying to stand, her figure was bent almost at a right angle; on other days she could maintain a tolerably erect position. She was able to cross her room slowly, though she could not return till after some minutes' rest in the chair. With assistance, she got up stairs at bed-time. She remained excessively emaciated, though she had somewhat gained in vigor and improved in expression of countenance from the time of the opening of the abscess.

On the 13th of March, at the suggestion of Dr. R. M. Hodges, she was etherized and thoroughly examined by that gentleman and myself. A probe, inclined obliquely downwards and outwards from the main opening, penetrated right and left three or four inches, its point being depressed when at the farthest place reached, about an inch from the front of the patient. On examination by the rectum and by the vagina, it was doubtful whether the point of the probe could be detected, though Dr. H. thought that on performing ballottement he obtained obscure indications of its presence. The uterus, normal in size and condition, was placed very high in the vagina, and was with difficulty reached. The anterior sinus was almost obliterated, the posterior quite deep. The body of the uterus was felt prominent in the rectum, but was in no sense altered from its natural size and condition. After the examination, the leading sinuses and one or two fistulous openings which had formed in the neighborhood of the original puncture, were more freely opened and made to communicate.

After that time the discharge of pus from the wound became much more abundant. Her death took place three months later. Twice during that period masses of unquestionably fecal matter made their way through the external opening, the largest one being about an inch long in either direction. Several glands in either groin suppurated and discharged. At the time of the etherization, there was an enlargement about one inch wide and two inches long, situated an inch and a half above the umbilicus and one inch to the right of the median line, which was then the principal source of suffering. It was not possible to demonstrate any connection between this tumor and the main abscess. Eight weeks later a moderate discharge of pus took place at this point, and the tumor rapidly disappeared.

The patient slowly declined with the symptoms usually accompanying an extensive suppurating surface. For some time before her death the lower extremities were in an anasarctous condition. There was delirium during the last two days of life.

No important remedial attempts were ever made.

At the autopsy, there were found in the whole lower half of the abdomen the usual appearances of old and extensive peritoneal inflammation. The intestines were glued together in every direction by firm adhesions. The appendix cæci was firmly attached throughout its whole extent to the cæcum, and presented at its extreme end an irregular perforation, as large as a half-dime piece. There was no other perforation in the course of the intestines. No foreign body could be detected in the cavity of the peritoneum, though it is quite possible that one of small size might have escaped notice. The tumor above the umbilicus to which reference has been made, was shown to have been only a deposit of pus in the cellular tissue of the parietes. The uterus and its appendages were in a healthy condition.

The case here described gave rise in its earlier stages to considerable difference of opinion as to its point of origin; one competent observer referring it to the parts around the uterus, while another was inclined to think that disease of some of the pelvic bones was the source of trouble.

The regularity and natural character of the dejections during the whole course of the disease, seem worthy of notice. Perforation of the appendix cæci is known to be not a very rare affection in this neighborhood, and yet so few cases of it have been publicly reported to the profession, that it appeared desirable to make known the details of even a single instance.

At the late meeting of the American Dental Convention in Saratoga, a gold medal was awarded to Dr. N. W. Kinsley for his invention of a successful appliance in cases of cleft palate.

EUROPEAN OPHTHALMIC INSTITUTIONS. No. II.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Quite a number of gentlemen of celebrity for their treatment of diseases of the eye, are included among the brilliant staff of the general hospitals of Paris; but the city does not contain special public hospitals devoted to these affections, like those of London.

The eminent advantages it offers to students in this department are found in private clinics, maintained at the expense of the gentlemen who conduct them. These, however, are on so large a scale, as regards the number of out patients, and the frequency of operations, as to leave nothing to be desired.

The clinics of Doctors Sichel, Desmarres and Liebreich are held within short distances of the School of Medicine, and at such hours as admit of a good morning's work in the general hospitals before attending them. Most of those who inscribe their names are advanced students, or have already graduated, and each is allowed his turn for special examinations of patients and for seeing operations to the best advantage. Private courses, on the use of the ophthalmoscope and on operations, are also given, where more extended explanations can be made than are possible in the brief clinical lectures given by the professors upon the interesting cases under treatment during the hours of consultations.

The class of cases varies considerably from those most frequent in London; catarrhal affections of the conjunctiva forming a much larger proportion of the whole than the strumous ulcerations of the cornea, so numerous in the sister city. In the treatment of these, both the nitrate of silver in solution and the crayon of sulphate of copper are employed—the latter more largely than in any others of the large institutions of England or the Continent.

At the time of my first visit, more than seventeen years ago, the Parisian Ophthalmic School occupied the highest place. Since that period, Germany, Holland and England have contributed, to an extent never, perhaps, equalled within the same period, to the advancement of knowledge in this department. And, though these improvements were at first accepted with a certain reserve, at Paris, there appears to be at present a determination not to be left behind in the onward progress of our science. The pathological conditions on which the ophthalmoscope has thrown so much light, are being thoroughly investigated, and the new operative procedures resulting therefrom are most successfully applied to the treatment of glaucoma and others of the affections formerly treated by internal means alone. One of the finest illustrated works on the phenomena disclosed by the ophthalmoscope, was published during my stay in Paris, by Mons. Liebreich, and there are numerous other indications of activity.

Apart from the large increase of the relative number of capital operations, from the new classes of cases now relieved by surgical means, I observed a decided change for the better in the after treatment of those operated on. They are subjected to less active anti-phlogistic treatment, and less rigorous confinement, than was formerly believed to be necessary.

The pathology of strabismus has been re-studied, and the operations for its relief are done with more certainty, since the indications are more accurately determined. Staphyloma is also removed in a manner to leave the eye-ball in a better condition for avoiding sympathetic inflammation of the other eye, and to give a better stump for the support of an artificial eye, should the patient choose to wear one.

The days for operations vary at the different cliniques; so that by attending them in turn, more or less operations may be witnessed nearly every day.

At present, a student may have, at Paris, an opportunity for becoming acquainted with the new theories and modified practice of all the eminent men of other continental cities, as well as the skilful example and teachings of those who represent what may be termed the French school.

Truly yours, H. W. W.

Berlin, Prussia, 4th July, 1863.

ON MYCETOMA.

BY H. V. CARTER, M.D. LOND., ASSISTANT-SURGEON BOMBAY ARMY.

IN the following remarks it is proposed to give some account of a very serious disease widely prevailing in India, and in its nature and pathological characters well worthy the attention of the surgeon and naturalist. "Mycetoma" stands for a form of swelling which is caused by the growth of a fungus. The term is sufficiently expressive, and briefer than, if not otherwise preferable to, that of "Fungus disease," under which I at first described the affection. Since those observations were made (March, 1860) many facts have come to light which almost complete the natural history of mycetoma, so that it may not be premature to offer the following as at least a basis for subsequent research.

A condensed description of the pathological characters of the disease, and a short account of its natural history, will be presented in succession; the facts upon which both are founded being entirely derived from personal observation.

I. The feet and hands are the only parts attacked; but this feature of the affection, as also its local or endemic character (which must still be called Indian), may require to be modified in the course of time and after more extended observation. Patients present themselves with a foot or hand (generally the former) much swollen,

of a dark color, and studded with numerous sinuses; the form of the swelling is more or less globular, and as to its extent, the whole of the member, or one side or part only, may be implicated. In the former case the projecting fingers appear to be imbedded, being themselves generally free; and the sole or palm is flat or even convex. Seldom does the disease extend much beyond the ankle or wrist, and its whole appearance, at first sight, somewhat resembles a long-standing scrofulous affection. The sinuses are considerable in number, and often clustered together about the sole, ankles, or dorsum of the foot; some are simple openings, others are raised upon soft elevations or present a pouting edge. The appearance of the more recent, especially in preserved specimens, is characteristic, being circular in form, from one third to one half inch in diameter, and gradually deepening towards the central aperture, from the removal of successive layers of cuticle; white patches are frequently seen around. The size to which the swelling may attain varies; in advanced cases its circumference may be eighteen inches, or upwards, and the form is then hugely misshapen.

Any one who is acquainted with the fungus-disease could not mistake it, when tolerably advanced, for ordinary caries; the size of the foot, its globular form, and the number and appearance of the sinuses, being the chief diagnostic characters; to which may be added, the absence of a corresponding degree of constitutional disturbance, pain, or hectic fever, and the patient is generally of a scrofulous or syphilitic taint. But there is one test which is applicable in almost all cases, and that is the character of the discharge. Sometimes the fungus-particles are so abundant as to block up the apertures of the sinuses, or float away in numbers in the thin serous or sero-purulent fluid, and when less numerous they may generally be detected with the aid of a lens. In the black variety a single glance will be sufficient, and in the pale and soft (which have been well compared to mustard or poppy seeds), their appearance is hardly less characteristic. The presence of these particles in the discharge from the sinuses is an infallible test of the nature of the disease; and by the use of the microscope I was very early enabled to make a correct diagnosis in a rather obscure case, but generally this aid is not required. The external appearances of mycetoma appear to be the same, whatever the form of fungus-growth. The sinuses are the terminations of canals, more or less lengthy and tortuous, which occasionally lead to bone; but the latter will not usually yield to pressure of the probe, for it is not really in a carious condition, although partly absorbed.

A section of a foot thus affected presents, on first view, much confusion of parts. The skin is greatly thickened, and the bony, muscular, and fibrous tissues seem blended and intermixed with a glairy or tenacious slough-like material, of reddish or greyish tint; globular masses of fungi, too, are seen scattered about, which are either

yellowish and of cheesy consistence (the so-called tubercles?), or deep brown or black, and much firmer. With a little attention, however, the following arrangement becomes evident: the collections of fungi are lodged in spherical cavities hollowed out in the osseous cancellous tissue, or in the soft parts, from which "loculi" branching tubular canals pass off, frequently inosculating, and terminating either in closed expanded extremities or on the surface at the sinus-apertures. These canals, like the loculi, are lined throughout by a membrane, easily separated from the bone or blended with the softer tissues, and they also contain fungus-particles imbedded in the soft or glairy material above mentioned; it is evident that their office is to conduct the fruits of the vegetable parasite to the external surface, where they are expelled in the serous discharge. A varying amount of inflammation, with its results, attends the growth of these foreign bodies, and the bones of the foot and leg, or of the hand, are affected in a striking manner, which, however, need not here be described; the spherical cavities which they contain are the most peculiar feature, and caries, or ulceration of the articulations, is seldom present, absorption from pressure being the only agent at work.

Mycetoma makes its appearance by a small, flattened, indolent tumor or "lump," firm to the touch, little painful, and of slow growth. In the course of a few months raised soft spots, or blebs, or vesicles, arise, which soon burst and let out the fungus-particles; sinuses thus are formed, and persist until all are expelled; meantime the swelling enlarges, or fresh ones appear, and so the disease progresses. The commencement is often on the sole of the foot; or, in the case of the hand, one of the fingers may be first attacked, as a most interesting specimen in my possession shows.

The natural duration of the disease is prolonged, the cases ordinarily seen being of from four to ten years' standing, and sometimes longer; its termination seems only coeval with exhaustion of the vital powers. A spontaneous cure must, I think, be exceedingly rare, though doubtless within the range of possibility. Some idea of the frequency of this unique affection may be gained from the fact that individual observers in this country have reckoned their cases by the score; one gentleman sent me particulars of seventy-five cases he had treated, and even in Bombay a year seldom passes without three or four cases being seen at the Jamsetjee Jejeebhoy Hospital, although the disease is not endemic here. It has only been seen in natives hitherto, the explanation of which is obvious, as they alone go barefooted, and seldom wash the feet thoroughly. Other noteworthy features are the following: it has mostly a single local manifestation; it is much most frequent in men, and during the middle periods of life, and commonest amongst the agricultural classes; it is not hereditary, or peculiar to any diathesis. In all these particulars, as well as in its endemic character, the fun-

gus-disease resembles the guinea-worm disease, and is unlike scrofulous affections, leprosy, elephantiasis, &c.; it is indeed a much more serious affection than the Dracunculoid, and merits far more the attention of medical officers in India.

As to treatment, amputation is a certain cure, so long as every part invaded by the growth is removed, and it is necessary to mark this, as partial amputations have failed. Were it possible (of which I have strong doubts) to destroy the vegetable growth by local applications or injections, this plan might be adopted previous to the more serious procedure; a very intelligent graduate of the Grant College sent me word that he thought he had eradicated the disease by the free use of strong nitric acid, but time must tell how far such means are really available; the wonderful fecundity of the parasite and its deep penetration into the tissues, seem to me almost insuperable obstacles.

II. *Description and Natural History of the Fungi.*—These foreign bodies—the sole cause of disease—are not of a uniform appearance; but as the history, course, and appearance of the disease seem to be in all cases the same, so, it may be inferred, is its exciting cause; and it is well known that these low-organized growths are susceptible of great modifications according to external circumstances; some experiments, to be presently mentioned, indicate, moreover, a common origin of the two most frequent forms of fungi. Of the three varieties distinguished below, two were first noticed by myself, and I also was enabled to detect the real nature of the second or most common, which had been previously described by my colleague, Dr. G. R. Ballingall, and by him submitted to the late lamented Professor Quekett,* without, however, a definite opinion being elicited of its character.

1. The black fungus occurs in more or less spherical masses, attaining the size of half an inch in diameter; outer surface of a jet-black color, and minutely tuberculated; section of a rich deep brown, and radiated in aspect; consistence very firm, friable, and readily yielding along the radii, sometimes tearing like decayed wood. Structure of closely aggregated fasciculi (diam. $\frac{2}{10}$ to $\frac{4}{10}$ in.) cylindrical, beaded, branching and blending, and radiating from a common centre; they are composed of pale, homogeneous fibres (diam. $\frac{1}{100}$ to $\frac{3}{100}$ in.), and at their peripheral extremities expand into firm, rounded "heads" of a deep black color, to the varying projection of which the tuberculated character of the exterior is due. These globular expansions (diam. $\frac{1}{10}$ to $\frac{1}{12}$ in.) are also found at the ends of the shorter branches, and are composed of closely packed cells (beaded cellular filaments?) of an orange tint, interspersed amongst which are larger, thick-walled cells (abortive sporangia?).

* I would here beg permission to add my testimony of respect and regard to the memory of that amiable and talented man, in whose society I passed many profitable hours during the time I held the Studentship of Anatomy in the Royal College of Surgeons.

These larger masses occupy the "loculi" before mentioned, and seem to break up into smaller fragments, each of which corresponds to one or more of the globular "heads" thus become detached; and these black particles, incalculable in number, crowd the canals or sinuses on their way to the outer part of the body; they are somewhat larger than a pin's head in size, and may alone be present in the foot. Containing the reproductive elements, these black particles will, under favorable circumstances, germinate, and we then find a red mould-like fungus spring up; this is probably the parent, so to speak, or normal form of the black fungus of mycetoma. The latter also occurs in another condition, having undergone degeneration (fatty) in the foot, leaving lighter colored masses, crystalline in consistence (stearine or margarine?) and devoid of structure; this change is an approximation to the next variety.

2. Small masses of cheesy consistence and light-brown tint, formed of an aggregation of granular particles, and occupying the same "loculi" as the above. The granules or particles are quite visible to the unaided eye, and resemble poppy seeds; their number is immense, and they are freely discharged by the sinuses. Each consists of numerous minute rounded or angular bodies (diam. about $\frac{1}{60}$ th in.), which are enveloped on all sides by a deep crystalline fringe (stearic?), thus presenting a curious appearance, enough to perplex both Dr. Ballingall and Professor Quekett, more especially as the rounded bodies appear to be structureless, or only finely granular. It was not until I met with a specimen of this variety of mycetoma, in which the fungus particles were free from the crystalline fringe, and still showed a cellular structure, that I learned the true nature of these bodies; they are degenerated fungi. In their interior may sometimes be seen clear nucleus-like forms, which somewhat resemble spores, but which are probably oil globules.

3. Once I found countless minute pink-colored particles, visible to the eye as reddish grains (like Cayenne pepper), and when magnified exhibiting a bi- or multi-partite aspect of regular arrangement; when single the particles were oval, and resembled, more or less, in size and structure, the bodies just described, but they possessed the property of multiplying themselves by subdivision, and their color was different. The cellular structure was not apparent, but I conclude that it once existed. The crystalline envelope was absent, though, as in other cases, much free fat (also of a pink tinge) was seen.

On the present occasion it is not necessary to enter into further details respecting these parasitic growths; I hope one day to record the results of closer examination, and now proceed to offer a few remarks on the natural history of mycetoma:

It may be regarded as certain, that the hand or foot becomes accidentally inoculated with the spores of some mould or mould-like cryptogam, which at certain periods of the year—most likely previ-

ous to or during the wet season, when all kinds of fungi abound—makes it appearance on the soil of particular localities: the naked, unwashed feet of the agricultural laborer must be peculiarly liable to such contingency, and it is not necessary to infer the pre-existence of an artificial abrasion of the cutaneous surface, as the spores are quite capable of passing into natural apertures—e. g., the sweat ducts. In many specimens I have noticed pinkish streaks in the substance of the skin and subjacent tissue, on the sole of the foot, &c.; and on further examination, finding these streaks to contain numerous spore-like cells in various states of growth, I conclude that they constitute the first stage of development of the disease.

As to the specific character of the parasite, I was at first strongly inclined to compare the fungus of mycetoma with the “rusts” and mildews which attack so many cereals and grasses, and to ask if it is not possible that the species infesting common Indian grasses, &c. (e. g., sorghum, maize), if transplanted into the human foot, might not give rise to the disease; but more recently, as the result of further inquiry, and in deference to the opinion of Rev. M. J. Berkeley, our great British authority, with whom I have had the advantage of corresponding on this subject, I am inclined to surmise that the human fungi correspond to those imperfect states of ordinary moulds, &c., which have been distinguished by the term “sclerotia.” Under certain unfavorable circumstances, the mycelium of the mould ceases to put forth the organs of fructification, and assumes the form of a firm, compact, cellular substance, capable of resisting adverse influences, but also susceptible, under more favorable circumstances, of again developing into the normal or fundamental species—a phenomenon essentially analogous to what occurs in the lowest forms of animal life, and, in a far less degree, to the hybernation of some of the higher.

Now it happens, that on several specimens of mycetoma, placed in spirit or water shortly before the monsoon season, a red mould has appeared on the exposed surfaces, whilst other preparations, similarly placed, have not shown any such appearance; again, fungus-particles from the foot, set in moistened rice-paste, have also given rise to the same mould, whilst plain rice-paste, placed side by side, has been either unaffected or only yielded common forms. I have recently ascertained this fact, with respect to both the chief varieties of the disease, and it throws clear light upon the origin and nature of this destructive parasite.

Mr. Berkeley's opinion is to the same effect, and he informs me that he should name this red mould *Chionyphe* (mucor?) *Carteri*; I had not ventured, from want of practical knowledge, to suggest a name, although the fungus was fully referred to by me last year (1861).

It cannot be denied that this mould has not been seen in its natural locality, and also that cotton soil from the affected districts

has failed to yield it when moistened and exposed to air; but the observations and experiments that have been made are as yet too few and incomplete to enable us to speak positively on this part of the subject.

Did space permit, I should gladly point out the numerous analogies that exist between this unique parasitic affection and other entophytic and entozoic diseases, all of which, it seems to me, to transcend, in both interest and importance; but I trust enough has been said to afford some idea of its appearance and characters.

Note.—Further information may be found in the last three volumes of the “Transactions of the Medical and Physical Society of Bombay,” especially No. 6, and Mr. Berkeley has just published, in the “Intellectual Observer,” a short description of the fungi, based chiefly on my memoirs, and illustrated by figures which, to a certain extent, agree with my own, but partly differ; the characters of *Chionyphe Carteri* are laid down as follows—“hyphasmate ex albo flavo-rubroque; sporangiis demum coccineis; sporis breviter fusiformibus.”

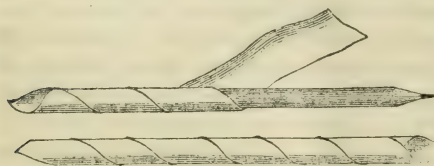
With regard to another subject, that of leprosy, a short account of which lately appeared (Jan., 1863) in this *Review*, I would add that additional information, necessarily omitted here, may be found in the eighth volume of the same “Transactions.”—*British and Foreign Medico-Chirurgical Review*.

MEDICATED CIGARETTES.

By W. E. BOWMAN, M.D.

CIGARETTES may be made of almost any variety of thick paper, but that kind should be selected that on burning yields a smoke most easily inhaled. I have always employed the heavy paper used for copy book covers (olive pressings); thick blotting paper, however, makes a good cigarette, but the regular filtering paper does not answer, as its smoke is dense and suffocating.

First, cut the paper into strips about seven inches long and an inch and a quarter wide, and next ascertain how much fluid it requires to saturate twenty-five of these pieces. This is readily done by soaking them in an exactly measured ounce of water, when on withdrawal it will be found that about five fluid drachms of the liquid has been imbibed; this will give the key to the strength you are to make the solutions.



Next saturate the slips with the remedy, and when nearly dry gum or paste one border of each, and roll it around a pencil, as shown in the following wood-cut; afterwards withdraw the pencil, and the cigarette is made.—*Can. Lan.*

Arsenical Cigarettes.—Boil 25 grains of arsenious acid (the lump broken up is purest) in a Florence flask, with four ounces of water, down to the quantity required to saturate 100 slips of the paper previous to rolling. They will then contain a quarter of a grain each. If you have not the usual apparatus, hang the flask above some live coals by means of a wire.

Mercurial Cigarettes.—Dissolve three drachms of red precipitate in three drachms of nitric acid, and add enough water to make up the quantity required to saturate 100 slips of paper. They will contain about three grains of the nitrate of mercury.

Nitre Cigarettes.—Dip the paper in a saturated solution of the nitrate of potash before rolling.

Balsamic Cigarettes are made by giving the dried nitre cigarettes a coating of tincture of benzoin.

In the *British Medical Journal*, Dr. Nevins, of the Royal Infirmary School of Medicine, Liverpool, speaks highly of these cigarettes in a number of cases.

Aphonia.—A patient who could not speak above a whisper for over a year, probably due to a thickened condition of the chordæ vocales, as she had no pain or constitutional symptoms, used the mercurial cigarettes for a month, and perfectly recovered.

Offensive Discharges from the Nostrils, with a sense of uneasiness in the frontal sinuses, was quite cured in about a month with the mercurial cigarettes. The patient held his nose after taking a mouthful of the smoke, and then forced it into his nostrils in the manner practised by accomplished smokers.

Polypus in the Nose.—A patient who had been twice operated upon for polypus, is now able to keep the disposition to form fresh polypi in check, by smoking the mercurial cigarette in the same manner, when he feels that uneasiness which warns him of the danger of its recurrence.

Deafness.—When dependent upon an obstructed Eustachian tube, he finds the nitre cigarettes, made with brown paper, most successful, and that the smoke forced into the tympanum from the throat gradually restores the sense of hearing. The circumstance which first led him to adopt this method, was hearing a deaf person on one occasion remark, that when he was sneezing the day before, he heard perfectly; the violent effort appeared for the moment to have dilated the Eustachian tube, and hearing was the result. He says, that in a deafness of seven years' standing, he had benefited a patient more by this treatment than by any other.

Phthisis.—Trousseau long ago recommended a puff or two of an arsenical cigarette twice or three times a day in phthisis.

When the attention of the profession has been duly aroused to this subject, there will doubtless be found many other affections in which medicated cigarettes may be advantageously employed, as in

syphilitic ulcerations of the throat, ozæna, offensive breath, obstruction of the lachrymal duct, diphtheria, &c. &c.—*Canada Lancet*.

Army Medical Intelligence.

TREATMENT OF GUN-SHOT WOUNDS OF CHEST AND ABDOMEN.

[Communicated for the Boston Medical and Surgical Journal.]

{ HEADQUARTERS ART'Y BRIG., 5TH CORPS, ARMY OF THE POTOMAC,
CAMP NEAR ALDIE, VA., June 25th, 1863.

GEN. W. A. HAMMOND, *Surgeon-General U.S.A.*

(*Extract.*)—SIR,—I have the honor to submit for your consideration the following modes of treatment of gun-shot and penetrating wounds of the chest and abdomen, in which suppuration has not commenced.

All foreign bodies within reach having been removed, and bleeding of the wound having ceased, if it be from gun-shot pare the edges of the wound all around, as in the operation for vesico-vaginal fistula; bring the opposite edges together, and retain them in accurate apposition by metallic sutures; carefully dry the wound and parts immediately surrounding, place thereon a few shreds of charpie arranged crosswise after the manner of warp and woof, pour on the charpie a few drops of collodion so as to saturate it and form a sort of collodion cloth, let it dry, then apply one or two additional coats of collodion with a camel's hair pencil, and repeat the process until satisfied that the wound is *hermetically sealed*. A dossil of lint may then be applied over it as a compress, secured by adhesive straps and roller bandage.

The natural condition of the parts is now approximately restored. The lung is suspended in a closed cavity; the volume of air admitted while the wound was open, soon becomes absorbed, and the lung is again at liberty to expand freely. The most distressing symptom, *dyspnœa*, is relieved immediately.

At the Hospital of the 2d Div., 5th Corps, I applied this dressing to two cases of gun-shot wound of the chest, several days after they were received at the battle of Chancellorville, both of them suffering greatly from *dyspnœa*. In both, the symptoms were alleviated at once, and the next day one said he felt quite well, and the other continued to feel better. The following day they were sent to General Hospital, and were lost sight of.

Suppuration, which is apt to be so excessive and fœtid in consequence of the admission of constantly-renewed currents of atmospheric air, promises to be *prevented* by this method, or very much modified in extent and character. The coagulated blood in the pleural cavity, which becomes decomposed and fœtid, producing a direct depression of the vital powers, is reduced to a simply mechanical inconvenience, and gradually becomes absorbed. The dressing is economical in point of time, as it is quickly applied, and may seldom need renewing. In the case of a private of the 18th U. S. Infantry, in which I used this dressing in 1861, for the first time, for bayonet wound of the abdomen, it remained intact until after the wound had entirely healed. It is simple and cleanly, and, if successful, will prevent the patient becoming obnoxious to himself and to all around him.

If this mode of treatment were carried out, I believe the fatality of

these wounds would be greatly diminished. I have been unable to demonstrate the value of this treatment, as every case but one, which was remarkably successful, has been sent away to some hospital where the dressing has invariably been removed and replaced by water or some other dressing. I therefore respectfully request that, if it meet your approbation, such arrangements be made as will enable me on the first opportunity fairly to test the value of this plan of treatment.

I remain, very respectfully, your obedient servant,

(Signed)

B. HOWARD, *Ass't Sur. U.S.A.,
Surgeon-in-Chief Art'y Brig., 5th Corps.*

NEGRO REGIMENTS—DEPARTMENT OF THE TENNESSEE.

VICKSBURG, July 27th, 1863.

MESSRS. EDITORS,—Having finished an inspection, under the direction of the Medical Director of the Department of the Tennessee, of the negro regiments located between Lake Providence and Sherman's Landing, and knowing that the public, medical and general, take considerable interest in this new branch of military power, I take the liberty of sending you a few notes, extracted from my report.

The regiments of African descent, as they are called, in this Department number seven, which are rapidly filling up to their full quota. Several others are also being organized, and will soon be in the field. At present we have about five thousand negro soldiers in this Department, whose daily conduct in camp and in field is solving great questions connected with the negro as a soldier.

I had to do with many of the wounded of the late battle at Milliken's Bend, and have thus seen the negro in the hospital, and under the surgeon's knife. I have inspected him in camp, and have conversed freely in reference to him with his commanding officers, and I am happy to say that I believe the experiment of making the negro a military power will be a success. The officers in command, without exception, spoke to me in the highest terms of the discipline and courage of their men. Some went so far as to say that they would prefer leading a black to a white regiment.

In a medical point of view, I have reported the following conclusions:—

First. In my opinion, the medical staff should be re-organized.

Second. The regiments, including the hospitals, should be supplied immediately with tents, cooking utensils, and their full quota of camp equipage generally.

Third. The officers, both military and medical, should pay special attention to the cooking department, supervise the quantity and quality of the food, both of the well and the sick, so as to make them correspond as nearly as possible with the previous habits of the negro. Government rations, as now administered, are too large in quantity and too varied in quality for the simple habits of the negro, who does not ordinarily consume as much as the white man.

Fourth. Care should be taken not to overwork or overdrill the African. He should rest from labor during the heat of the day.

The woolen clothes of the Northern Army, with the exception of the blouse, are too heavy for the negro in the Southern climate, and

should be exchanged for cotton or other light fabrics, made to fit his person loosely.

Sixth. In sickness the negro soldier should be carefully attended by white persons. The reason for this is, the dependent character of his mind, produced by a life of slavery. Intelligent blacks can, however, in a very short time be educated to perform these duties.

Seventh. Medical officers should depend more upon good nursing and diet, than upon drugs, for the cure of their patients.

Eighth. It is a mistake to suppose that the African is not affected by the intense rays of the sun. Exposure to great heat produces languor, cerebral congestion and sun-stroke, though the non-conducting power of the covering of his head protects that organ somewhat from the extremes of heat.

Ninth. The negro is not exempt from the diseases of his climate, any more than the white. He suffers from the same maladies, and ought to be treated by the same remedies.

Tenth. The medical and commanding officers should follow strictly the Regulations of the Army in locating and managing the sinks in their respective commands.

Eleventh. Surgeons in charge of regiments, as soon as any of their patients cease to improve in regimental hospitals, should send them to general hospitals, where the conveniences of treatment are necessarily greater.

The above are some of the conclusions which I have drawn, after a personal inspection of the regiments and camps of the negroes. I have recommended, also, the establishment of a general hospital, with a capacity of three to five hundred beds, to be located in a healthy position, and to receive the worst patients from the various regimental hospitals.

Respectfully, your obedient servant,

JAMES BRYAN, *Surgeon U.S.V.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 13, 1863.

NEXT to the professional tyranny of overdosing, we would set that which seems to take delight in placing the unfortunate patient under excessive restraint in matters of diet and regimen. There is a class of physicians, happily growing smaller every day, who seem to think that the moment a man gets sick all his natural tastes and appetites must be put in the closest bondage. Sickness being an abnormal condition, of course the normal demands of the system must be opposed, to bring the whole operation of the machine into consistent working. The food must be entirely different from that which is palatable at other times, and the ingenuity of friends and attendants must be taxed to provide substitutes for the usual beverages of health. We think we are speaking to the experience of every physician when we say that very often these well-meant efforts are a source of infinite disgust and discomfort to the patient. Some physicians there are who are so constituted that the bare suggestion by the patient of some article of

food or medicine is enough to set them in dead opposition to it. Nothing can produce a stronger dislike on the part of an intelligent patient than such a display of professional authority. Well do we remember the vehement expressions of a sufferer from such severity of discipline, when describing a series of such "slips between the cup and the lip" by which he had been made to feel the authority of his medical adviser while recovering from a severe surgical operation. He was fully possessed with the idea that the interdict was merely an exercise of arbitrary power, and his experience in one instance, when the prohibition came too late, only confirmed this impression.

Cold water is an innocent fluid—of late years it has had its extravagant admirers even—and yet how common it is for patients to be unduly restrained in the use of it. How many unfortunate infants, gasping for it in the parched and fervid heat of scarlet fever, are compelled to swallow saffron tea instead! In such cases, we know the fear of nature's refreshing draught is much more apt to be on the side of the parents and friends than the physician. And yet this is not always so. Not long since we saw a patient, an adult, suffering from severe pneumonia. Some dissatisfaction on the part of the patient led her to call in another practitioner. "Doctor," said she, "is there any objection to my drinking cold water?" "Certainly not," was the answer. "Why," said the patient, with a look of the greatest satisfaction and relief, "Dr. — wouldn't let me touch a drop of it." The nurse then joined the colloquy, and confessed that she had, "*unbeknownst*" to the doctor, given it to her, but it was under a fearful sense of responsibility.

In conclusion, then, let us bear in mind that *naturâ duce* should be our motto in matters of diet and regimen with the sick, as it is in all other matters of treatment. To most of our readers we know such a suggestion is superfluous, and almost demanding apology. That thirsty sufferer, then, must be our excuse; we trust it is a sufficient one.

WE received the letter from which the following is an extract some time since, but were unwilling to publish it at the time, while the rebels were in Maryland, lest our friend might be subjected to rough usage in consequence. We think, however, that his creditable management, by which four hundred prisoners were saved, equivalent to four hundred taken from the enemy, should be publicly known. We trust we shall be excused for thus violating the confidence of a private letter. The letter is dated Cumberland, Md., June 22, 1863.

* * * "This city was abandoned to the enemy by the entire withdrawal of all Government troops, on Monday, 15th inst. I had about 400 patients in the hospital at the time, but on the following day I succeeded in removing all but eight, who were too sick to be taken from their beds. Most of them hid in the neighboring mountains, where they were perfectly safe from capture or parole, and their wants could be sufficiently attended to. The following morning (17th) the rebels appeared on the hill just back of my office, and threw a few shell into the town. Not meeting with any response, they came in with a flag of truce, and soon after our streets were filled with greybacks. Their force was not large, and they appeared to be greatly in fear of an attack while here, and hurriedly took themselves off after a few hours' occupation. They commenced writing paroles of the eight

sick soldiers in hospital, but in their alarm they fled before the writings were finished, so that, so far as I can learn, I have not had a man captured or paroled.

"They visited my store-house and dispensary, but could find nothing worth taking; I had secreted my stock of quinine, morphine, *calomel* and *tartar emetic*.

"The case of exsection you refer to is doing well, and I shall be happy to report at a future time. The rebel surgeons got hold of the patient, who was in the streets in citizen's dress at the time. They examined his arm, and questioned him closely as to the nature of the injury, but the fellow concocted a story that wholly misled them.

"No property, public or private, was destroyed in the city by the enemy while here.

Very truly yours,

J. B. LEWIS, *Surgeon U.S.V.*"

SOME time since we noticed, somewhat at length, Dr. Arnold's pamphlet on medical and surgical provision for railroads. Dr. A.'s laudable efforts to secure some efficient legislation in the State of New York for this purpose, were prompted by the great suffering and mortality on the railroads of that State, for the want of sufficient preparation to meet the exigencies of sudden accidents. The statistics of the past year only confirm the necessity of such a provision; and we sincerely hope it will not be long before the desired action of the legislature may be brought about. We copy from *Hunt's Merchants' Magazine* the following extract from the official report of the State Engineer for the past year. Sixty-six of the eighty-two railroad companies in the State of New York have made their reports.

"Number of passengers killed	-	-	-	-	-	-	-	22
"Of which on city roads	-	-	-	-	-	-	-	6
"Number of passengers injured	-	-	-	-	-	-	-	45
"Of which by city roads	-	-	-	-	-	-	-	21
"Number of employees killed	-	-	-	-	-	-	-	51
"Others than employees and passengers killed	-	-	-	-	-	-	-	80
"Others than employees and passengers injured	-	-	-	-	-	-	-	42
"Total killed (city roads, 12)	-	-	-	-	-	-	-	153
"Total injured (city roads, 31)	-	-	-	-	-	-	-	115."

THE comparative liability of white and colored troops to diseases of a malarious origin has long since attracted the attention of the English authorities, and has doubtless greatly influenced the composition of their forces serving in malarious countries. From the annual report of the British army for 1859, it appears that in Jamaica the ratio of mortality is as follows:—White 101.9, black 8.2; Bahamas, white 159.0, black 5.6; Sierra Leone, white 410, black 2.4. These facts have an important bearing on the present policy of our Government in organizing negro regiments for service in the malarious regions of the South. Already Surgeon-General Hammond has been able to contribute an item of statistical information bearing on this point. In a recent communication to the Secretary of War he states that Medical Inspector Townshend reports, that in the Department of the Gulf white and colored troops are found serving together, and equally subjected to malarious influences. The ratio of sick, of diarrhoea, dysentery, remittent, intermittent, typhoid fevers, &c., is white 10.8 per cent., and colored

0.8 per cent. The argument in favor of the employment of colored troops at the South, if based on their comparative immunity from the diseases peculiar to that region, is conclusive.—*Am. Med. Times.*

SPIRIT RATIONS IN THE U. S. NAVY.—The following General Order, now in force, was issued in July, 1862:—"From and after the 1st of Sept. next, the law allows *five cents per day* to each person in the navy, now entitled to the spirit ration, in commutation and lieu thereof, which shall be in addition to their present pay.

"Pay officers will credit this allowance on their rolls, under the separate head of "undrawn spirits," to each person on board ship entitled to a ration, and at the end of each quarter will pay the amount due, to such of the crew and marines as may elect to receive it. If any person shall decline to receive such payment, it must remain to his credit on the books of the ship and be accounted for in the same manner as other pay.

"The commutation price of the navy ration will continue to be twenty-five cents, without reference to the five cents allowed as above mentioned."

REVACCINATION.—M. Vleminckx, the distinguished Medical Director of the Belgian army, has been for some years past engaged in investigating the subject of revaccination, and the following are the conclusions he has arrived at, based upon 2,000 revaccinations performed with the greatest care:—1. The revaccination of well vaccinated subjects generally produces but very slight useful effect. 2. Revaccination is much more called for in the case of persons who have had the smallpox than in those who have been vaccinated. 3. Revaccination is more successful in proportion to the length of time that has elapsed from the period of the first vaccination or an attack of variola. 4. Prior to the age of 25 revaccination is generally useless. 5. From that age until the 35th year, it gives rise to useful results in a certain number of individuals, but still in an exceedingly limited number, so that, without proscribing it, it should not be very strongly recommended. 6. After the age of 35 it becomes truly a preservative, and consequently necessary. 7. When it gives rise to no result on a first occasion, this is no reason why it should not be resorted to at another epoch, there being no proof that the receptivity may not have become developed in the period between the two operations. 8. The revaccination of pupils of schools and seminaries is useless. 9. The same may be said respecting the soldiers of the Belgian army. These conclusions were arrived at by M. Vleminckx in 1858, and none of them were shaken by the results of other investigations conducted on a large scale in 1861–62; and an epidemic of variola which broke out in East Flanders in 1862, has still further confirmed their accuracy.—*Medical News and Library*, from *Med. Times and Gaz.*, June 20, 1863.

MERCY HOSPITAL IN CHICAGO.—An ample plot of ground, beautifully improved, and occupied by a well constructed building, on the corner of Calumet Avenue and Rio Grande Street, has been secured and fitted up as a permanent location for this hospital. The building is constructed of brick, 40 by 80 feet, and four stories high. It contains six public wards for ordinary medical and surgical patients, both male

and female; six smaller rooms, admirably adapted for the accommodation of those patients whose circumstances render them desirous of better and more quiet rooms than can be had in a general ward; and a ward especially for lying-in women. We shall thus have a general hospital, worthy of the name, and adequate to the wants of the city. It will continue, as heretofore, under the excellent management of the Sisters of Mercy. The medical wards will continue under the charge of Prof. N. S. Davis; the surgical, under the charge of Prof. E. Andrews; and the lying-in department under the care of Prof. W. H. Byford.—*Chicago Medical Examiner*.

MEDICAL DEPARTMENT OF LIND UNIVERSITY.—A new College edifice is in course of erection for the Medical Department of Lind University, in Chicago, Ill., to be completed in September, and used for the next annual course of instruction. It is of brick, three stories high, and will combine all desirable conveniences and comforts. The name of this University having been changed by the Board of Trustees to that of *Lake Forest University*, a new name for the medical school became necessary, and the Faculty have given to it the title of the *Chicago Medical College*, by which it will hereafter be known.

WE have received from Dr. H. R. Storer, too late for insertion in this week's JOURNAL, a criticism on Dr. John's paper on the use of Chloroform in Midwifery, printed in last week's JOURNAL. It will appear in our next week's issue.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 8th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	120	66	186
Ave. mortality of corresponding weeks for ten years, 1853—1863,	58.7	50.0	108.7
Average corrected to increased population	00	00	119.76
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
17	2	0	1	0	6	8	52

BOOKS AND PAMPHLETS RECEIVED.—Humphrey's Journal of Photography and the Allied Arts and Sciences. Edited by John Towler, M.D. New York. No. 7, Vol. xv.—Annual Announcement of the Geneva Medical College, Session of 1863-64.—Medical Communications with the Proceedings of the Seventy-first Annual Convention of the Connecticut Medical Society.—The Physician's Visiting List, Diary and Book of Engagements for 1864. From Lindsay & Blakiston, Philadelphia.

DIED.—In Walpole, Aug. 7th, suddenly, Dr. Harvey E. Clap, of Wrentham, 49.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 8th, 186. Males, 120—Females, 66.—Accident, 1—apoplexy, 10—asthma, 1—disease of the bowels, 1—inflammation of the bowels, 3—ulceration of the bowels, 1—congestion of the brain, 4—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 2—cholera morbus, 1—cholera infantum, 52—bilious colic, 1—consumption, 17—convulsions, 8—croup, 2—debility, 1—diarrhoea, 2—diphtheria, 4—dropsy, 3—dropsy of the brain, 3—drowned, 2—dysentery, 6—epilepsy, 1—erysipelas, 1—typhoid fever, 8—gangrene of leg, 1—gastritis, 1—disease of the heart, 5—infantile disease, 3—intemperance, 4—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 1—marasmus, 5—necrosis of the leg, 1—old age, 3—paralysis, 1—sun-stroke, 8—tabes mesenterica, 1—teething, 1—thrush, 1—unknown, 7.

Under 5 years of age, 85—between 5 and 20 years, 9—between 20 and 40 years, 49—between 40 and 60 years, 29—above 60 years, 14. Born in the United States, 121—Ireland, 53—other places, 12.

MEDICAL JOURNAL ADVERTISING SHEET

ALBANY MEDICAL COLLEGE.--Two full courses of lectures are delivered annually in this Institution. The *Spring Course* commences on the *second Tuesday in February*, and the *Fall Course* on the *first Tuesday in September*. Each course continues sixteen weeks. Degrees are conferred at the close of each term. Fee for full course, \$85. Graduation fee, \$20.

Materials for dissection are abundant, and furnished to Students on as reasonable terms as at any similar Institution in the country. A spacious Hospital has been opened nearly opposite the College, to which Students are admitted free of charge.

Weekly Cliniques are held in the College. Boarding, from \$2.50 to \$3.50 per week.

ALDEN MARCH, M.D., Prof. of Principles and Practice of Surgery.

JAMES McNAUGHTON, M.D., Prof. of the Theory and Practice of Medicine.

JAMES H. ARMSBY, M.D., Prof. of Descriptive and Surgical Anatomy.

HOWARD TOWNSEND, M.D., Prof. of Materia Medica and Physiology.

CHARLES R. PORTER, M.D., Prof. of Chemistry and Medical Jurisprudence.

JOHN V. P. QUACKENBUSH, M.D., Prof. of Obstetrics and Diseases of Women and Children.

J. V. P. QUACKENBUSH, Reg'r.
Albany, May 8, 1862. u

GARDNER'S PERMANENT SOLUTION OF FERRO-PROTOXIDE OF IRON.--The attention of the Medical Profession is called to this novel and eminently successful preparation of Iron. It is becoming so well known, and so generally used, although but a short time before the public, that it has already taken its place among the standard preparations of the day. It contains 40 grains of Ferri Protoxide to the fluid ounce, and is prepared in two forms--bitter and sweet; the former the result of a combination of a vegetable tonic (Quassin, containing no Tannin, whereby a precipitate of Tannate of Iron is avoided) with the mineral. The rapidity with which this article is assimilated is really surprising, usually producing observable effects in chlorosis in from three to six days.

Jersey City, N. J., Jan. 27, 1863.

I am familiar with the medicinal properties of the preparation known as Gardner's "Liquor Ferri Protoxide," having prescribed it in numerous cases since its first introduction to the profession.

It is an elegant preparation, combining in the most convenient and efficacious form, the well-established medicinal virtues and properties of iron.

Of its place and power as a remedial agent, I claim for it the *very first* in those peculiar conditions of the system which demand the administration of this mineral.

I could cite many cases, but deem it unnecessary, believing that all it requires is a fair trial to be fully appreciated by an enlightened profession.

CHARLES TAGGART, M.D.
No. 114 Wayne St., Jersey City.

Albany, N. Y., Jan. 21, 1863.

I have used Gardner's Solution of "Protoxide of Iron" in my practice, and I think it a very valuable preparation, superior to any preparation in use.

BAR. P. STAATS, M.D.

The following has been received from Dr. J. V. P. Quackenbush, Surgeon-General of the State of New York.

Surg. General's Office, Albany, May 2, 1863.

I have used the solution of the Protoxide of Iron, which you prepare, and am much pleased with the result. I deem it a most excellent preparation, and as such would recommend it to the profession.

Respectfully yours,

J. V. P. QUACKENBUSH.

Manufactured solely by the proprietor, **ROBERT W. GARDNER**, Druggist and Chemist, Jersey City, N. J. **JOSEPH WATSON**, General Agent, 31 Park Row, N. Y. Wholesale Agents for Boston, S. M. COLCORD & Co., cor. Hanover and Portland sts. July 31.--6m.

BOUQUET D'HAVELOCK—A delicate, rich and enduring Extract for the mouchoir, distilled from a choice combination of fresh flowers, equal if not superior to any of the perfumes of the celebrated *Lubin*. For sale only by

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The fact that nearly 4000 persons are now wearing the "Palmer Leg," testifies to its superiority over all others. The "Great Prize Medal" was awarded to it in London over thirty five competitors from all parts of Europe.

The "Palmer Artificial Leg" is lighter than any other, yet capable of sustaining a continuous pressure of over 500 lbs. It is more natural in its movements. It more closely resembles the natural leg, it being impossible to distinguish it. It is more durable, wearing for years. It requires less repairs. It can be afforded for a less price. Nine out of ten of the most celebrated Surgeons in all parts of the world recommend the "Palmer Leg" in preference to all others.

All pretended improvements over it are simply *theoretical notions*, intended to deceive. The extended reputation of this invention is a sure guaranty to the patient, that in procuring the "Palmer Leg" they will secure the *best*, and run no risk.

The patient is enabled to walk immediately upon its application. It is applied to the *shortest* and *tenderest* stumps with perfect success.

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Sept. 18.

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PARKER'S COMPOUND VEGETABLE OIL AND PATENT VENTILATING NIPPLE SHIELD.--For the Cure of Chapped or Sore Nipples. --As this Compound is perfectly harmless, the Patient need have no fear whatever in its free use. The taste being pleasant, the child never refuses its accustomed nourishment on account of it.

This method of treating sore nipples has been tried very successfully by many physicians in Boston and vicinity, among whom are Drs. Walter Channing, John Homans, Chas. G. Putnam, Chas. D. Homans, Boston; Drs. Sewall F. Parcher, D. V. Folts, East Boston; and Dr. T. R. Nute, Roxbury--to whom Mr. Parker is allowed to refer.

WEEKS & POTTER, 170 Washington st., Boston, agents for the New England States; and for sale by all Druggists. May 22--1y*.

RETREAT FOR NERVOUS INVALIDS, AT PEPPERELL, Mass.--The undersigned will continue to receive Nervous Invalid patients at the Establishment for many years occupied by the late Dr. Nehemiah Cutter.

JAS. M. STICKNEY, M.D.

Pepperell, April 22, 1863.

Apr. 23--ti

DR. GARRATT, No. 9 Hamilton Place, Boston (near Park-st. Church), continues to give special attention to the medical uses of Electricity, i. e. primary galvanism, in *Nervous Affections*--for re-kindling the vital forces; for restoring tone in certain cases of atony, weakness and pain, as also in many of the more grave nervous affections--traumatic, wasting, and reflex-paralysis; cold-rheumatisms, sprains, sciatica, lumbago, irritable spine, neuralgia, headaches, nerve-deafness, sensitive eyes, infantile palsy, chorea, amenorrhœa, torpor of bowels and the like. Feb. 5.

DR. J. H. DIX has removed to Boylston, corner of Tremont street, and attends exclusively to **DISEASES OF THE EYE AND EAR.** Dec. 24, 1857.

MEDICAL JOURNAL ADVERTISING SHEET.

COLLEGE OF PHYSICIANS AND SURGEONS. MEDICAL DEPARTMENT OF COLUMBIA COLLEGE.—Corner of 23d Street and Fourth Avenue, New York. Session of 1863-64.

EDWARD DELAFIELD, M.D., President, and Professor Emeritus of Obstetrics.

ALEXANDER H. STEVENS, M.D., LL.D., Professor Emeritus of Clinical Surgery.

JOHN TORREY, M.D., LL.D., Prof. Emeritus of Chemistry and Botany.

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SAMUEL ST. JOHN, M.D., Prof. of Chemistry.

THOMAS M. MARKOE, M.D., Adjunct Prof. of Surgery.

WILLIAM DETMOLD, M.D., Prof. of Military Surgery and Hygiene.

T. G. THOMAS, M.D., Adjunct Prof. of Obstetrics.

HENRY B. SANDS, M.D., Demonstrator of Anatomy.

The Preliminary Term for the Session of 1863-64 will commence on Monday, Sept. 21st, and continue four weeks, until the opening of the Regular Term in October.

The Regular Term will commence on Monday, October 19th, and continue until the second Thursday of March following.

Fees for a full Course of Lectures, \$105. Matriculation, \$5. Graduation, \$30.

JOHN C. DALTON, Jr., M.D.,
Secretary of the Faculty.

Students of the College are admitted to all the Clinical Instruction given in the New York and Bellevue Hospitals, on the same basis as heretofore. At the New York Hospital, Drs. Smith, Parker, Markoe and Sands, and at the Bellevue Hospital, Drs. Parker, Clark and Thomas, are members of the attending staff.

Aug. 13—3m



Joint (*Hoins*), etc. Soldiers and marines furnished by appointment of Surgeon-General Hammond, U. S. Army, without charge. Resections of joints of superior extremity successfully treated with surgical apparatus. HANDS and ARMS of superior excellence. FEET for limbs shortened by coxalgia, new, unique and useful. Partial paralysis, ununited fractures, treated with improved appliances,

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Send for Pamphlets and References.
Aug. 6—1y

DOUGLASS'S NEW PATENT ARTIFICIAL LEG. The great improvement in the construction of Artificial Legs, perfected by my invention, from a thorough practical knowledge of the profession, has met with such remarkable success, that I have removed my office to Burt's Block, Main St., where I have increased facilities for manufacturing. Recommended by the most distinguished civil and military Surgeons.

Differing from all others, combining the most scientific, mechanical and anatomical principles, with the most natural articulations, and possessing great strength, lightness and durability, it is perfectly adapted to every form of amputation.

Pamphlets, with a full description of the improvements, sent free.

Manufactured exclusively by the inventor,

D. DE FORREST DOUGLASS,
Burt's Block, Main Street,
Springfield, Mass.

Je4—tf

GENEVA MEDICAL COLLEGE.—The Session of 1863-64 will begin Wednesday, Oct. 7th, 1863, and continue sixteen weeks.

Faculty.

JOHN TOWLER, M.D.,

Dean and Registrar.

JAMES HADLEY, M.D.,

Emeritus Prof. of Chemistry and Pharmacy.

JOHN TOWLER, M.D., Professor of Chemistry and Pharmacy.

FREDERICK HYDE, M.D., Prof. of Principles and Practice of Surgery.

GEORGE BURR, M.D., Prof. of General and Special Anatomy.

NELSON NIVISON, M.D., Prof. of Physiology and Pathology.

HIRAM N. EASTMAN, M.D., Prof. of the Practice of Medicine and Materia Medica.

Prof. of Obstetrics, Diseases of Women and Children, and Medical Jurisprudence.

LYMAN W. BLISS, M.D., Demonstrator of Anatomy.

Fees, payable in Advance.—Matriculation, \$3. Tickets for the whole Course, \$50. Graduation, \$20. Demonstrator's ticket, \$3. Anatomical material, \$5.

Special attention paid to Military Surgery, &c.

Further information may be obtained by addressing J. TOWLER, Dean of the Faculty, Geneva, N. Y.

* R. STONE, M.D., will perform the duties of this department.
Aug. 13—1015

BERKSHIRE MEDICAL COLLEGE.

Faculty.

HENRY H. CHILDS, M.D., President, and Emeritus Prof. of Theory and Practice of Medicine.

TIMOTHY CHILDS, M.D., Prof. of Surgery.

PAUL A. CHADBOURNE, M.D., Prof. of Chemistry and Natural History.

CORYDON L. FORD, M.D., Prof. of Anatomy.

R. CRESSON STILES, M.D., Prof. of Physiology and Pathology.

WM. HENRY THAYER, M.D., Prof. of Theory and Practice of Medicine.

WILLIAM F. SEYMOUR, M.D., Prof. of Obstetrics and Diseases of Women and Children.

WM. WARREN GREENE, M.D., Prof. of Military Surgery and Materia Medica.

E. B. LYON, M.D., Demonstrator of Anatomy.

The Forty-first Annual Course of Lectures in this Institution will commence on the first Thursday in August next, and continue sixteen weeks.

The Summer Reading Term, gratuitous to those who attend the Lecture Course, will commence June 25th, and continue until the beginning of the Regular Term.

It is intended that this instruction shall be eminently thorough in every department. A full course of lectures will be given upon Military Surgery and Hygiene. Medical and Surgical Clinics are held twice a week.

Fees.—For the several Courses of Lectures, \$50. Fee for those who have already attended two full courses at regular incorporated Medical Schools, \$10. Matriculation Ticket, \$3. Students who have attended two full courses at this Institution, will only be required to matriculate. Graduation Fee, \$18. Library Fee, \$1.

For further information and circular, address

WM. WARREN GREENE, M.D., Dean,
Pittsfield, Mass., April 10, 1863. M 6—ew3m



SELPHO'S PATENT ELASTIC ARTIFICIAL LEG AND HAND, 516 Broadway, opposite St. Nicholas Hotel, New York.
Aug. 14—1y

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D. R. C. BOTH gives special attention to Consumption. 230 Tremont Street.
Jy 2—1y.

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Boston Medical and Surgical Journal

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THE BOSTON MEDICAL AND SURGICAL JOURNAL.

EDITED BY

SAMUEL L. ABBOT, M.D., AND JAMES C. WHITE, M.D.

Whole No. 1851.] Thursday, August 20, 1863. [Vol. LXIX. No. 3.

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HARVARD UNIVERSITY. MASSACHUSETTS MEDICAL COLLEGE.

THE annual course of Medical Lectures of Harvard University will commence at
 the Massachusetts Medical College, in North Grove st., Boston, on the first Wednesday
 of November, 1863. The regular course will be as follows:—

- | | |
|--------------------------------------|---|
| Obstetrics and Med. Jurisprudence | by Professor D. HUMPHREYS STORER, M.D. |
| Morbid Anatomy by | “ JOHN B. S. JACKSON, M.D. |
| Clinical Medicine by | “ HENRY I. BOWDITCH, M.D. |
| Anatomy and Physiology by | “ OLIVER W. HOLMES, M.D. |
| Theory and Practice of Medicine by { | Professor GEORGE C. SHATTUCK, M.D., and |
| | Adj. Prof. CALVIN ELLIS, M.D. |
| Surgery by | Professor HENRY J. BIGELOW, M.D. |
| Chemistry by | “ JOHN BACON, M.D. |
| Materia Medica by | “ EDWARD H. CLARKE, M.D. |
- Demonstrator, DAVID W. CHEEVER, M.D.

Clinical Medical and Surgical Instruction will be given at the Massachusetts General
 Hospital, with Surgical Operations.

Collateral special medical instruction will also be given at the Hospital by Lectures
 and otherwise, by Drs. Bowditch, Abbot and Ellis.

Abundant material is afforded for the study of Practical Anatomy. The Room de-
 voted to this department is open day and evening, and lighted by gas.

Fees for the Lectures, \$85; Matriculation fee, \$3; Graduation fee, \$20.

Good Board can be obtained at \$2.50 to \$5.00 per week. Boarding places provided
 on application to the Janitor at the College.

Students are requested, upon coming to Boston, to call upon the Dean.

D. HUMPHREYS STORER, *Dean of the Faculty,*
 No. 132 Tremont St., Boston.

Aug. 6, 1863—tL

MEDICAL JOURNAL ADVERTISING SHEET.

COLLEGE OF PHYSICIANS AND SURGEONS. MEDICAL DEPARTMENT OF COLUMBIA COLLEGE.—Corner of 23d Street and Fourth Avenue, New York. Session of 1863-64.

EDWARD DELAFIELD, M.D., President, and Professor Emeritus of Obstetrics.

ALEXANDER H. STEVENS, M.D., LL.D., Professor Emeritus of Clinical Surgery.

JOHN TORREY, M.D., LL.D., Prof. Emeritus of Chemistry and Botany.

JOSEPH MATHER SMITH, M.D., Prof. of Materia Medica and Clinical Medicine.

ROBERT WATTS, M.D., Prof. of Anatomy.

WILLARD PARKER, M.D., Prof. of the Principles and Practice of Surgery and Surgical Anatomy.

CHANDLER GILMAN, M.D., Prof. of Obstetrics, the Diseases of Women and Children, and Medical Jurisprudence.

ALONZO CLARK, M.D., Prof. of Pathology and Practical Medicine.

JOHN C. DALTON, Jr., M.D., Prof. of Physiology and Microscopic Anatomy.

SAMUEL ST. JOHN, M.D., Prof. of Chemistry.

THOMAS M. MARKOE, M.D., Adjunct Prof. of Surgery.

WILLIAM DETMOLD, M.D., Prof. of Military Surgery and Hygiene.

T. G. THOMAS, M.D., Adjunct Prof. of Obstetrics.

HENRY B. SANDS, M.D., Demonstrator of Anatomy.

The Preliminary Term for the Session of 1863-64 will commence on Monday, Sept. 21st, and continue four weeks, until the opening of the Regular Term in October.

The Regular Term will commence on Monday, October 19 h, and continue until the second Thursday of March following.

Fees for a full Course of Lectures, \$105. Matriculation, \$5. Graduation, \$30.

JOHN C. DALTON, Jr., M.D.,

Secretary of the Faculty.

Students of the College are admitted to all the Clinical Instruction given in the New York and Bellevue Hospitals, on the same basis as heretofore. At the New York Hospital, Drs. Smith, Parker, Markoe and Sands, and at the Bellevue Hospital, Drs. Parker, Clark and Thomas, are members of the attending staff.

Aug. 13-3m

MUTUAL LIFE INSURANCE.—The New England Mutual Life Insurance Company (Office Company's Building, State st., cor. Congress st., Boston) insures lives on the mutual principle.

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Nov. 13 *Medical Examiner.*

GARRATT ON MEDICAL ELECTRICITY.—embracing electro-physiology and meteorology; descriptions and uses of the different currents obtained from various kinds of Batteries; "Electro-Therapeutics," showing clearly, yet limiting those classes of nerve-affections, and of joint and muscle diseases, to which this treatment is adapted; methods of application, &c. By ALFRED C. GARRATT, M.D. Second Edition. Pp. 700. 100 Illustrations. Price, \$3.00. Feb. 5

D. R. C. BOTH gives special attention to Consumption. 230 Tremont Street. Jy 2-1y.

LEOPOLD BABO, German Apothecary, No. 33 Boylston street, Boston. Sept. 18-1y

GENEVA MEDICAL COLLEGE.—The Session of 1863-64 will begin Wednesday, Oct. 7th, 1863, and continue sixteen weeks.

Faculty.

JOHN TOWLER, M.D.,

Dean and Registrar.

JAMES HADLEY, M.D.,

Emeritus Prof. of Chemistry and Pharmacy.

JOHN TOWLER, M.D., Professor of Chemistry and Pharmacy.

FREDERICK HYDE, M.D., Prof. of Principles and Practice of Surgery.

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Prof. of Obstetrics, Diseases of Women and Children, and Medical Jurisprudence.

LYMAN W. BLISS, M.D., Demonstrator of Anatomy.

Fees, payable in Advance.—Matriculation, \$8. Tickets for the whole Course, \$50. Graduation, \$20. Demonstrator's ticket, \$3. Anatomical material, \$5.

Especial attention paid to Military Surgery, &c. Further information may be obtained by addressing

J. TOWLER, *Dean of the Faculty,* Geneva, N. Y.

* R. STONE, M.D., will perform the duties of this department. Aug 13-1015

BERKSHIRE MEDICAL COLLEGE.

Faculty.

HENRY H. CHILDS, M.D., President, and Emeritus Prof. of Theory and Practice of Medicine.

TIMOTHY CHILDS, M.D., Prof. of Surgery.

PAUL A. CHADBOURNE, M.D., Prof. of Chemistry and Natural History.

CORYDON L. FORD, M.D., Prof. of Anatomy.

R. CRESSON STILES, M.D., Prof. of Physiology and Pathology.

WM. HENRY THAYER, M.D., Prof. of Theory and Practice of Medicine.

WILLIAM P. SEYMOUR, M.D., Prof. of Obstetrics and Diseases of Women and Children.

WM. WARREN GREENE, M.D., Prof. of Military Surgery and Materia Medica.

E. B. LYON, M.D., Demonstrator of Anatomy.

The Forty-first Annual Course of Lectures in this Institution will commence on the first Thursday in August next, and continue sixteen weeks.

The Summer Reading Term, gratuitous to those who attend the Lecture Course, will commence June 25th, and continue until the beginning of the Regular Term.

It is intended that this instruction shall be eminently thorough in every department. A full course of lectures will be given upon Military Surgery and Hygiene. Medical and Surgical Clinics are held twice a week.

Fees.—For the several Courses of Lectures, \$50. Fee for those who have already attended two full courses at regular incorporated Medical Schools, \$10. Matriculation Ticket, \$3. Students who have attended two full courses at this institution, will only be required to matriculate. Graduation Fee, \$18. Library Fee, \$1.

For further information and circular, address

WM. WARREN GREENE, M.D., *Dean.* Pittsfield, Mass., April 10, 1863. M 6—ewam

CHAS. H. SPRING, M.D., has removed from No. 215 Washington st., to No. 7 Harrison Avenue.

Special attention given to Diseases of the Spine. Office hours, 9 A M to 2 P M. Jan. 9-1f

JUST RECEIVED, a general assortment of Surgical, Obstetrical and Dental Instruments; French and English, Pocket, Dissecting and Medicine Cases; Stethoscopes and Flint's Auscultating Instruments, Auricles, Compact Ear Trumpets and Conversation Tubes, &c., all for sale at a small advance from cost. J. W. PHELPS, Dec. 4-1y. 68 Tremont Street, Boston.

STERLING'S AMBROSIA FOR THE HAIR.—An oily extract of Roots and Herbs. A fresh invoice of this celebrated hair dressing just received and for sale by I. BARTLETT PATTEN, Dec. 4-1y. 27 Harrison Avenue, Corner Beach Street, Boston.

THE
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXIX.

THURSDAY, AUGUST 20, 1863.

No. 3.

ON CHLOROFORM INHALATION DURING LABOR; WITH ESPECIAL
REFERENCE TO THE PAPER BY DR. JOHNS, OF DUBLIN,
LATELY ADMITTED INTO THIS JOURNAL.

BY HORATIO R. STORER, M.D., OF BOSTON, SURGEON TO THE PLEASANT STREET
HOSPITAL FOR WOMEN.

[Communicated for the Boston Medical and Surgical Journal.]

IT must have occurred to many besides the writer that the editors of the *Dublin Quarterly Journal*, by admitting Dr. Johns' article on Chloroform Inhalation into their pages for May last, had done much to impede the progress of practical midwifery. They were perhaps compelled to it by the fact that as one of their former contributors and a practitioner of good local reputation, the publication of his paper was due to Dr. Johns as an act of courtesy—certainly for no other reason.

However this may be, it is very much to be regretted that our own JOURNAL should have reprinted, without comment, what after all and though unintentionally on the part of its author, is but an offence against truth, against science and against common sense, which it is the duty of every obstetricist to brand. This opinion will be shared by all whose actual experience of the merits of the question can alone entitle them to judge. The republication is the more to be regretted, occurring at this time of all others, when in the very same issue of the JOURNAL the Editors were lamenting its alleged feeble support, since it might be taken by outside parties as so far justification of this assumption. It is possible that with every one who has not carefully perused the article in question, the Editors may have been misled by its title, which would give a very erroneous impression of the author's real aim.

In the first place, Dr. Johns has made an attack, however concealed his approaches, not upon chloroform inhalation alone, but upon that of ether as well; his paper being really a bitter tirade upon the whole employment of anæsthesia in childbirth. This assertion is proved by his own words to that effect; "Many have testified to the fact that uterine action has been lessened by *anæsthetics*," &c.

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"In the employment of *anæsthetic* agents during instrumental delivery, we deprive ourselves," &c.

"When *sulphuric ether* was first employed as an *anæsthetic* in this country, a medical student inhaled it as an experiment, and the smell was evident off his breath, to any one who spoke with him, for nearly a week after its employment." To what end was this bald statement introduced by Dr. Johns? Was it for the purpose of throwing discredit upon the whole matter by ridicule, of proving the author's unacquaintance with the effects of *anæsthetics* in ordinary employment, or by introducing a subject foreign to that in hand—as is also his page or more concerning the deleterious effects of *ergot*—to prop by mere and empty words a desperate cause?

Dr. Johns continues: "We very frequently see better and safer recoveries after tedious and painful *than after rapid and painless labors*, and the latter are not the less likely to be seriously complicated; indeed, in former days, happy for the parturient female, such an opinion was entertained." Turn back, if he can, the wheel of time.

In the next place, he has made no assertion concerning the effect of chloroform in midwifery, that has not been charged over and over again, by some person or another, against ether, not even excepting that of actually fatal result; and this we do not hesitate to affirm has never yet occurred where chloroform was properly administered, under proper circumstances, in childbed.

Again, we are gravely assured that upon *anæsthetics* are dependent certain complications that have been common since the first confinement of the first mother, nay that even the profession are now accustomed to treat and to cure by *anæsthetics* themselves. Our author throughout writes as though the controversy were still in its infancy, with all its early crudities and absurdities of apprehension, and as though these were still worthy a moment's serious thought. Has he been sleeping these long years—*anæsthetized*, perhaps?

Dr. Johns calmly relates, in the evident belief that they are to the point of his argument, cases of gross malpractice, as though such were in any way or ever to be allowed weight in the solution of a scientific problem. I quote again: "The os was so located as only to be found by the well-educated and practised finger. The medical attendant, having failed to discover the real state of matters," proceeded to apply his instruments upon the uterus itself. In another case, also, the perforator, so constantly used in Dublin, was "pushed into the cervix expanded over the foetal head," and in a third "the medical man mistook the attenuated anterior section of the cervix for the membranes, and endeavored to perforate them with his nail." In these instances, fortunately for *anæsthesia*, it had *not* been resorted to; and therefore, as having no connection with our subject, Dr. Johns should never have introduced them, serving, as

they can possibly do, no purpose save to bring discredit upon the profession. He may well admit that had chloroform been "resorted to in either, it must be evident to all, even to the most skeptical, that the consequences would have been most disastrous." Are obstetric cases to be thus entrusted to any whose touch is *not* well educated and practised? Are results from other hands than these, or the dicta of persons confessedly incompetent for their duties, to be allowed place in our scales?

And finally, Dr. Johns has collected, from any and every source, however or not reliable, all sorts of unsubstantiated statements concerning the effects of anæsthesia, that have many of them been repeatedly disproved and rebutted; and these, thrown together without any method or logical sequence, he has arrayed as overwhelming and invincible. Such at first sight they may seem; flash upon them, however, the light of careful examination, prick them with the needle of even a moment's scrutiny, they equally collapse into so many instances of *non sequitur, post* rather than *propter hoc*, coincidence but not sequence. Every so-called fact that he has collected is a two-edged sword, very dangerous to the bearer unless more carefully handled than* he has done. The accidents that he relies upon still frequently occur where anæsthetics are not employed; they occurred as frequently in former years, before anæsthesia was known.

What, then, can be said of an attempt to explain them all by chloroform? Well have such been stigmatized as "pieces of unscrupulous and disreputable professional gossip."

"One day," says Forbes, "we had death from asphyxia; another, from coma; another, from hæmoptysis; some from convulsions; a few from pneumonia; and one or two from actual incrimination or explosion, through the accidental firing of the vapor within the air-passages. We have not had time to investigate all these terrible cases, but we may state that we traced the one which seemed the best authenticated—that from hæmoptysis—from its full-blown majesty in after-dinner gossip to its humble source in the hospital. And this was the case: a day or two after a successful operation, the patient pricked the gums while picking the teeth with a pin; and it was the product of this operation, not of the anæsthetic, seen in the spitting-pot by the patient's bedside, that was bruited about town, as of itself sufficient to settle the question for all future time."*

We must not forget that, as with all powerful agencies in medicine, much depends upon the purity of anæsthetics, upon the times of their employment and its mode—that medical statistics, prepared with whatever care, are notoriously unreliable, and that their fallaciousness in any given case may be considered proved, when there is strong reason, as here, to believe that they have been selected for a

* British and Foreign Medico-Chirurgical Review, April, 1847, p. 564.

pre-determined purpose, and with little regard to the circumstances under which they may have originated.

And again; Dublin was predisposed at the outset against anæsthetics in midwifery, because it was in Edinburgh that Dr. Collins' statistics, here so relied upon by Dr. Johns, were carefully analyzed and the frightful preponderance of craniotomy in Irish practice convincingly shown. London shared the prejudice, partly from the rivalry existing between its schools and that beyond the Tweed, and partly from the influence of a renegade Scotchman, an unsuccessful candidate for the midwifery chair of Edinburgh, whose spleen thus vented itself, as in many similar ways before and since. Dr. Johns' paper is merely a studied collection of all that these circumstances brought forth. The lapse of time has greatly softened the feelings of their several authors; an occasional flash, however, like the publication of this very paper, shows that the old animosities are not entirely extinguished.

Dr. Johns makes one very apposite quotation from Denham, the more valuable as perhaps explaining the strange results he professes to have got from the use of chloroform in midwifery:—"That chloroform may be, and sometimes is, given for the purpose of amusing patients, and making them believe that they are saved from a vast amount of pain, when in reality they have scarcely inhaled a single breath of it, I doubt not."

What can be said in sufficient condemnation of such treachery to our suffering and confiding patients, such refinement of cruelty, such desecration of the physician's priceless privilege, as is here implied? Of what possible worth can be the specious data, the false statistics furnished by men who practise such base artifices as these, or who admit that they are ever resorted to by those whom they may have quoted as authority? Dr. Johns, in his zeal, has here fairly over-shot his mark; let the weapon recoil.

To return; I do not intend to enter upon an examination of the many weak points of the article in question, but the assertion so broadly made by Dr. Johns, that the use of anæsthesia to mitigate and shorten the pangs of labor is only a backward step in our efforts to lessen child-bed dangers and mortality, is little less than an insult to the profession. I should have alluded to it in my paper upon the employment of anæsthetics in Obstetric Surgery and Medicine, read at the annual meeting of the Massachusetts Medical Society at Pittsfield, in June last, had not Dr. Johns' statements seemed so obviously unfair, so stale and utterly without foundation, as not to merit the slightest acknowledgment among scientific or practical men.

Having incidentally referred to my own position in this matter, I will merely add that I claim that all the host of trivial arguments like those of Dr. Johns, and others of far more weight, have been fully answered; that I consider the induction of anæsthesia during

labor not a matter of expediency or necessity alone, but a sacred duty, which, were we women, we should soon recognize; and that while I am willing to admit the overwhelming advantages of ether over chloroform for general surgical practice, I claim for this last the entire and sole control of child-bed. My reasons for these opinions I have unhesitatingly and I trust convincingly set forth in the paper to which I have referred. I do not care to anticipate their publication by repeating them here, and have just at present a very different matter on hand; to wit, the exposure of Dr. Johns' unfitness to enter the most extensive, most interesting and most important medical controversy of the age, whose participants are not to be diverted from their earnest work by grotesque mask of ridicule, or put to flight by bladder-strokes, however loudly sounding or plied with whatever force. Such as are Dr. Johns' arguments, however, what else can they be styled, unless as dust to be thrown into the eyes of the unwary? If armed with no better weapons, he cannot rest his claim to our attention upon the plea of *audi alteram partem*, for he represents neither, merely the crowd outside the ring; spectators it is true, but bound by every rule of honorable warfare to keep aloof from the contest.

Does this language seem uncalled for? Look, then, at its cause.

1. Obstetrics, the most noble of all departments of medicine, because resting, above all others, upon the honor of its practitioners, and above all others affecting the possibility of an incalculable increase of human life, by increasing the number of living births;

2. An attempt, made with very reasonable hope of success, to ensure that increase by shortening the average duration of labor—upon which, we are compelled to acknowledge, the present mortality mainly depends;

3. An opportunity at the same time, through this best gift of God to our profession—and I speak it with all reverence, for none of us males can possibly appreciate its full value—to mitigate the bitterest of human suffering; "What," says Meigs, "do you call the pains of parturition? There is no name for them but AGONY";

4. The fact that such attempt and such opportunity, whenever and wherever honestly made and properly appreciated, have been realized;

5. The position of the mass of the profession at the present time, in this country as well as abroad—prepared, now that the earlier heats of the controversy were past, soberly and sincerely to test the matter for themselves;

6. And now, the casting into our midst this bomb-shell of Dr. Johns, charged with gratuitous assumptions, slurs and manifest untruths; to light anew our prejudices, wound our personal feelings, and destroy our faith in all that the labor of years has been accomplishing.

If, however, this must be; if, as in the case of our Southern re-

bellion, reform can be had but by contest, the prejudice and apathy of a former age removed but by forcible attrition, and relief to the unnecessary pangs and peril to which ancient superstition has condemned our own flesh and blood, afforded but by the power of an enlightened outside public sentiment—let such then be accepted by those who recognize the weight of their mission. To have hastened the coming of its inevitable result will be sufficient reward.

The obstetricist, best of all, is able to feel the beat of the public pulse upon this question, and that also of his own profession. From close and pretty constant study of the matter, I am but confirmed in my opinion of nine years ago:

“But yesterday, and the man who dared give ether or chloroform in labor was considered as breaking alike the laws of Nature and of God; the time is close at hand when such will be said of all who withhold them, even in natural labor.”*

Hotel Pelham, 10th August, 1863.

CHOLESTERINE AND SEROLINE AS SECRETIONS.

[FROM an interesting paper on Cholesterine and Seroline as Secretions, contributed to the *American Journal of the Medical Sciences* for April, by Dr. J. H. Salisbury, we copy the concluding pages, as follows.—EDS.]

The following is a brief summary of the facts indicated by the preceding experiments:—

1. Cholesterine occurs largely in the ova of the human subject and of animals.
2. In the seminal fluid of the human subject, seroline and cholesterine are largely present, the former more so than the latter.
3. Cholesterine occurs very largely as a secretion in the saliva. No seroline is found.
4. Neither seroline nor cholesterine occurs in healthy urine.
5. Cholesterine occurs quite largely, and seroline in small quantity in jaundice-urine. (These bodies are probably always secreted by the kidneys whenever the liver, through organic or functional derangements, is unable to secrete them from the blood.)
6. Cholesterine or colorless blood-disks are secreted or effused from highly congested and inflamed mucous surfaces.
7. Cholesterine is secreted or effused from the peritoneal (serous) membrane in ascites.
8. Cholesterine occurs largely in the fluid of spina bifida tumors.
9. Cholesterine is secreted by the tear glands.
10. Human milk, previous to birth, is rich in cholesterine. No seroline detected in the experiment made.

* Preface to Simpson's Obstetric Works, p. xvi.

11. After the birth of the child, and during nursing, the mammary glands secrete largely cholesterine and seroline.
12. The milk of the cow is rich in cholesterine and seroline.
13. Butter, beef, and hog suet contain cholesterine and seroline.
14. The primary forms of the crystals of cholesterine appear to be the cube and rhombic prism; and that of seroline, the very acute rhombic or rhomboidal prism; though usually appearing as simply acicular.
15. Cholesterine and seroline are largely secreted from the blood by the sudorific glands during the sweating stage of intermittent fever. These glands become important blood depurative organs in this disease.
16. The kidneys largely secrete cholesterine in intermittent fever.
17. The kidneys secrete cholesterine in varicella.
18. The kidneys secrete cholesterine in diphtheritic conditions.
19. The kidneys largely secrete cholesterine in the disease known as *diabetes mellitus*.
20. The kidneys secrete cholesterine and seroline in remittent fever.
21. The kidneys largely secrete cholesterine in typhoid fever.
22. Cholesterine is secreted by the sudorific glands in health.

Concluding Remarks.—Cholesterine appears to be essentially a body, secreted from the blood by the glands concerned in digestion; the sudorific glands; those secreting tears and milk; and by the testis of the male and ovary of the female, and by the kidneys in hepatic disease. In the secretions of the testis (seminal fluid), seroline occurs more largely than cholesterine. In the female ova, cholesterine occurs largely, and no doubt has some office to perform in furnishing one important constituent of nourishment in the early foetal development; before, in viviparous animals, there are any uterine attachments; and in oviparous, before they escape from the ovarian envelopes. Mucous and serous surfaces do not appear to have any power to separate cholesterine from the blood; unless, perhaps, when under the influence of congestion and inflammation.

As cholesterine occurs so largely in the bile and saliva, two secretions important in digestion, in the female ova, and in the mother's milk upon which the young feed, is it not highly probable that it has some important function to perform in digestion, at all ages; and as nourishment and a soporific in infancy, it only becoming excrementitious proper when this office is ended, and it is changed into seroline (stercorine of Dr. Flint)?

It is believed to be pretty well established, that the true source of cholesterine is the nervous system, of which it is an effete product. From the nervous system it passes to the blood, and is removed from the blood by the liver.

These experiments go to show that the liver is not the only organ

which separates this body from the blood. The salivary, tear, mammary and sudorific glands; and the testis and the ovary come in, each in its peculiar time and place, as important aids. They also show that a portion of the cholesterine of the human body may be taken into it through the food eaten, consisting of milk and butter, eggs, beef, and hog fat, and as there are more or less blood and serous matter in meat, be taken in in that substance also. Still, these facts do not argue against the nervous system being its true original source. They only show that it is formed in the nervous system of animals as well as in that of the human subject; and that in feeding upon animal food, the vascular system may gather this substance from two sources, the nervous system and the food eaten. The nervous system being the source of cholesterine, and the tear glands secreting this body, may explain why the profuse shedding of tears, in health, for any great length of time, so enervates both physically and mentally.

All functional and organic derangements of the liver produce despondency. The dark side of the picture is the one ever prominent. Actions and remarks are perverted, and everything goes wrong. There is a tendency for this condition to relieve itself, especially in the female sex, by a profuse flow of tears. May not this peculiar mental and moral condition, full of sad forebodings, be but a part of that beautiful sympathy of action between different organs of the body, wisely designed, in this instance, to stimulate the tear glands to excited action, in order that they may perform, to some extent, the depurative office of a liver, and thus relieve, partially, a vascular system surcharged with cholesterine?

That weeping relieves sad and despondent conditions is so true that you everywhere find it proverbial; it is well known that sudden grief does much towards deranging the functions of the liver. The tear glands, through sympathy, appear to come in as little safety-valves to the vascular system on such occasions, as well as on others hereafter mentioned, where the liver is deranged in its functions.

In climates where there is a disposition to "biliousness" ("bilious climates"), there is a tendency to inaction of body and mind; a heavy lethargic feeling prevails; a greater tendency to lounge about lazily and to sleep than in less "bilious" localities; the intellect is inactive and heavy; there is also a tendency to the greater deposition of adeps—a tendency to obesity.

In all diseased conditions of the liver where its normal functions are impaired, there is great dulness and lethargy, with a feeling of melancholy sadness and a disposition often to doze and sleep.

Children while nursing sleep a great portion of the time; they fall asleep while feeding: there is also a remarkable tendency to take on fat. After being weaned they are much more wakeful, and the fatty deposits usually decrease.

The free use of cows' milk as food produces heaviness and a ten-

dency to sleep. The use of eggs largely as food produces a similar lethargic condition.

May we not account for the lethargic influence and the tendency to sleep and obesity of "bilious climates," on the ground of the blood and nervous system becoming and remaining constantly surcharged with cholesterine? In diseased conditions of the liver, when its depurative functions are impaired, we know the blood and nervous system become surcharged with this body, and we know that this surcharged condition produces results similar to those of "bilious climates."

May not the cholesterine and seroline in the food of nursing infants be one cause of their disposition to sleep and to become fat?

May not these bodies also, in milk and eggs, be the cause of their producing heaviness and sleep? When using milk and eggs as food, the liver has to perform the double office of removing the cholesterine formed by the nervous system and that taken into the blood by the food eaten. The result is that the blood and nervous system become surcharged with this body, and we have temporarily the same condition of the system that occurs in "bilious climates." The liver being more or less deranged in its functions in intermittent fever, the sudorific glands come in as blood depurative aids in freeing the vascular system of cholesterine and seroline and other effete matters. This may explain, to some extent, the advantage derived from the free use of diaphoretics as aids in the successful treatment and eradication of this disease.

The secretion of cholesterine from the blood by the kidneys, in intermittent fever, may explain why it is that the free use of diuretics (acetate of potash, &c.) are so beneficial often in its treatment. Without the free use of diaphoretics and diuretics in the treatment of intermittent fever, the disease is seldom so perfectly eradicated from the system as to prevent its re-appearance the following spring; while with their proper use, the disease seldom reappears, unless the system is again exposed for some length of time to the exciting cause.

The discovery of the fact that the kidneys secrete cholesterine largely in diabetes mellitus may throw some light upon the pathology and therapeutics of this peculiar disease.

Ready process for detecting the presence of cholesterine and seroline.—As the ordinary process for determining the presence of cholesterine and seroline is too lengthy and often beyond the facilities of the practising physician, I here give a simple method, which may answer as a very good approximate means (till a better is suggested) for detecting these bodies in urine and other secretions, and which may often be used with advantage by physicians in their practice as a diagnostic aid. Care should be taken, in the microscopic examination of crystals obtained from the secretions by this process, to not confound those of cholesterine with those of lithic acid and

chloride of sodium. As the secretion of these bodies by the kidneys is an abnormal function, one which they only perform when the liver, whose normal office is to secrete these bodies, is deranged, their presence in the urine will usually indicate hepatic derangement.

Place two to four ounces of urine in a six-ounce bottle, and add one ounce of pure ether; tightly cork, and agitate by turning quickly the bottle on different ends, allowing the ether to pass backwards and forwards through the urine, so as to wash it completely—two to five minutes' stirring are usually sufficient—then allow the ether to rise to the surface, and decant into a clean porcelain or glass dish and evaporate carefully to about ten drops, which place between glass slides and set aside for several hours to crystallize. When this is completed, a microscopic examination with a moderate power will detect the cholesterine plates and acicular crystals of seroline, if present.

PERSULPHATE OF IRON IN CAMP DIARRHŒA.

BY O. C. GIBBS, M.D., FREWSBURG, N. Y., LATE SURGEON 21ST REG'T N. Y. S. V.

IN the *Lancet and Observer* for October last, in the Commercial Hospital reports, there are several cases of diarrhœa reported, in which Dr. John Davis used the persulphate of iron, with very prompt and satisfactory results. That article did not meet my eye until quite recently.

When in the army service, I found diarrhœa to be the almost universal disease in the army, especially while in active duty in the field. Bad water, change of water, impure coffee, changeable weather, exposures, undue fatigue—each had the credit of producing it, and it certainly was very intractable, protracted and recurrent. I soon became convinced that to no one of these causes, nor to all combined, was the disease principally due. I have seen it as severe and as wide-spread when the army was stationary, in good quarters, the weather fine and unchangeable, and the water used of the purest character, bubbling pure and cool from the finest springs in the world. I soon became convinced the disease had its origin in a lack of a suitable amount of vegetable food! When potatoes, onions, cabbages, &c., were articles unknown in the army, for months in succession, the purest water, the healthiest climate, and the best sanitary regulations, would not serve to prevent camp diarrhœa, of a severe and intractable character. "Hard tack," salt pork, and poor beef, when long continued, do not furnish all the elements of a healthy nutrition, and debility and relaxation of all the tissues result.

Be the cause what it may, every army surgeon knows that diarrhœa is the bane of our army, and his especial annoyance. As an astringent and tonic, I soon commenced using the persulphate of iron, with

opium; and though without known authority, I had every reason to be pleased with the result. At first the remedy was used in one-grain doses, but those were soon increased to two and three, and, in some cases, as high as five-grain doses. I never saw harm result from its use. When the disease was checked, one or two doses a day, for one, two, or three weeks, was always advisable, to prevent recurrence.

One word in regard to opiates. When I went to the army, I was told opiates were not well borne. Observation soon convinced me they were simply inoperative, from insufficiency of the doses. I at once gave the remedy in two and three-grain doses, and, in some cases, even still more liberal doses. So beneficial did these doses prove, and so unaccompanied with unpleasant symptoms, that when a heavy day's march was before us, soldiers who were, or had recently been, afflicted with diarrhœa, would come to me before setting out, and ask to be supplied with two or three of these three-grain pills of opium. Such were very seldom compelled to give out because of their diarrhœa. So promptly efficient was the persulphate of iron, with full doses of opium, that scarce a day passed that some member of our regiment did not bring to me one or more long-suffering ones, from some other regiment, to whom he had confidently promised *his* surgeon would afford relief.—*Cincinnati Lancet and Observer*.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 13th.—*Large Abscess between the Bladder and Uterus*.—Dr. PUTNAM reported the case, which he had seen in consultation with Dr. C. D. Cleaveland.

The patient was a slender woman, aged 37, dark hair and eyes; active, but not strong; married seven years; menstruation always regular. During the winter of 1861 had unusually good health. In March, 1861, her husband was sick, and she nursed him assiduously for eight weeks. Menstruation at this period ceased on the second or third day. Immediately afterwards, she noticed a tumor in the abdomen. It appeared quite suddenly—"puffing right up," as she expressed it. It was not preceded by local uneasiness, except occasional slight pain in the back and hips, nor by any constitutional disturbance, except casual sensation of coldness. On the 25th of April, when Dr. P. saw her, the tumor was globular, about the size of a small foetal head, and in the centre of the abdomen, and slightly elastic. No positive hardness or resistance, except over a space of an inch or two towards the left iliac region. No tenderness on pressure.

A soft tumor occupied the upper part of the vagina. No neck or os uteri could be detected, but on the sacral surface of the tumor was a semilunar slit or valve, through which a sound could be passed for

an inch and a half. She did not look sick. Appetite good. Pulse 90, rather small. Skin cool.

July 13th.—Has had pain in sides and back; considerable dysuria and constipation. Has lost flesh and strength, though she has been up and dressed, and even walked out of doors. The tumor was more prominent and globular—about six inches in diameter. An opening was made by a scalpel, and about eight ounces of thick, yellow, inodorous pus discharged through vagina.

Aug. 29th.—Abdominal tumor as prominent as before the discharge of pus—like a foot-ball above pubes. Opened by scalpel per vaginam, and four quarts of pus discharged of rather disagreeable odor. After the escape of the pus, the parietes of the abscess closed down so as nearly to efface the cavity, the internal surface feeling rough and irregular when the finger was passed into the abscess. From this period constant discharges of pus continued till death, which occurred in November, 1862, about twenty months from the first appearance of the abscess. Menstruation regular nearly the whole time.

On dissection, a very defined and regular abscess was found between the bladder and uterus, which, though empty, was capable of holding from one to two pints. Parietes dense. Inner surface quite dark and knobbed, but not rough as from ulceration; looking as if an adventitious mucous membrane were forming. The uterus was considerably elongated by the growth of the abscess, and opened freely at the semilunar slit above referred to; in front of which last, and upon the surface of the vagina, was an opening through into the abscess, about large enough to admit a common-sized probe. The specimen is in the Cabinet of the Medical College.

JULY 13th.—*Cancer of the Stomach, with Empyema and old Peritonitis.*—Dr. MINOT showed the stomach and part of the intestines of a man, 50 years old, who died in the Hospital. The patient was always of a dyspeptic and costive habit, and for the past two years had distress after eating and sour eructations. Eight months ago he began to vomit, and lost flesh and strength steadily ever since. He had no acute pain, except a stitch in the cardiac region, when the stomach was distended, which was relieved at once by vomiting. Latterly, he had avoided vomiting by great care in diet, taking milk, eggs, &c., in very small quantities.

On his entrance to the Hospital, June 27th, he was excessively emaciated and feeble, and was confined to his bed. A hardened mass, having a semi-circular outline, was felt issuing from the middle of the left hypochondrium, passing two inches above the umbilicus, to near the junction of the cartilages on the right side. It was somewhat tender on pressure. Percussion gave a perfectly flat sound over the left chest, before and behind, and there was entire absence of respiration. The breathing was perfectly quiet. There was a slight expectoration of mucus, without cough.

He had, towards the last, some trouble from eructations, and some difficulty in expectorating, but he did not vomit while in the Hospital. He died easily, July 11th. He was treated by extract of conium, in doses of two grains, three times daily. On entrance, he was under the care of Dr. Gould, and afterwards came under that of Dr. Minot.

The stomach adhered closely to the liver, spleen, and adjacent portions of intestines. It was much contracted, and its walls thickened

in the last two or three inches of the pyloric portion, where the muscular coat was hypertrophied and striated. The subperitoneal cellular tissue here was thick, firm and of a whitish color. A short distance within the pylorus was a marked depression and ulceration, upwards of an inch in diameter.

All parts of the contiguous surfaces of the peritoneum were united by old adhesions, and projecting from the surface were many round, whitish nodules, from one eighth to half an inch in diameter, laminated in appearance on section, and containing, in some instances, a brownish, cretaceous mass. On microscopic examination, they appeared to consist of round, oblong or somewhat distorted cells, with very large nuclei and very distinct nucleoli.

The left pleural cavity contained five pints of thick pus, enclosed in several distinct sacs. The pleural surfaces were covered with a yellow, caseous deposit, and were puckered and reticulated between the ribs. The left lung was so much compressed that it did not crepitate, but was otherwise normal. The right lung did not collapse readily, but crepitated throughout. There were no tubercles in either lung.

The other organs were healthy.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 20, 1863.

CHOLERA INFANTUM.—The large number of deaths which have taken place in this city during the past three weeks must have attracted the notice of all who have examined the tables of mortality. So large a number has not occurred before, we believe, since the epidemic of cholera in 1849. During the week ending August 8th, the whole number amounted to 186, while the average mortality of corresponding weeks for the last ten years, corrected to the increased population, was only 119. A continued succession of days and nights intensely hot generally exercises a sudden and fatal influence upon many whose powers of endurance have been exhausted by chronic disease, and who under ordinary atmospheric conditions might have recovered or at least lived somewhat longer. The very large preponderance of male deaths, too, indicates that the rays of the sun must have produced a directly fatal effect upon some of those who labor beneath them; but a leap from 87 deaths per week to 186 in an interval of only fourteen days, must be explained by the action of some more than ordinary morbid agency. Its influence has been most marked among those least capable of resisting it, and we find, accordingly, that it is the destruction of young children to which the remarkable rise in the mortality of the city is chiefly due. During the last three weeks ending August 15th, the deaths of persons under 5 years of age were respectively 73, 85 and 87, and of these the majority were chiefly infants under 18 months. Through the kindness of our worthy City Registrar, Mr. Apollonio, who is always desirous of making his facts and figures useful to the medical profession, we have been able to examine the statistics relating to the frightful endemic of cholera infantum now prevail-

ing, by which 147 children have perished between July 15th and August 15th within the city limits. We were surprised to notice the extreme youth of the majority of these little victims, and we subjoin a table representing their ages in 90 cases.

Aged 1 month -	-	-	-	-	-	5	Aged 12 months -	-	-	-	-	-	6
" 2 months -	-	-	-	-	-	10	" 13 "	-	-	-	-	-	6
" 3 "	-	-	-	-	-	5	" 14 "	-	-	-	-	-	1
" 4 "	-	-	-	-	-	6	" 15 "	-	-	-	-	-	3
" 5 "	-	-	-	-	-	4	" 16 "	-	-	-	-	-	2
" 6 "	-	-	-	-	-	11	" 17 "	-	-	-	-	-	5
" 7 "	-	-	-	-	-	4	" 18 "	-	-	-	-	-	4
" 8 "	-	-	-	-	-	2	" 24 "	-	-	-	-	-	1
" 9 "	-	-	-	-	-	3							
" 10 "	-	-	-	-	-	5	Total	-	-	-	-	-	90
" 11 "	-	-	-	-	-	7							

We see, therefore, that 41 of the deaths occurred in children not more than six months old, and that 68 were within their first year. We are satisfied that this is in great part due to the custom so prevalent among poor and ignorant mothers of feeding their babes in part with other food than their own milk, even from the earliest age, and long before their stomachs are fitted to digest the matters forced into them. The milk which has been sold in the localities where the greatest mortality has prevailed, has been of the worst description during the last few weeks, consisting, in several instances in which we have examined it, of 50 per cent. added water, with a large admixture of burnt sugar, molasses and salt. Such a compound undergoes decomposition within a very short time after removal from the dealer's ice-chest, and can but derange a healthy stomach; its effect upon those to whom it is given as nourishment in this affection, may be imagined.

The duration of the disease, in the 34 out of the 90 cases in which this particular was given, was as follows:—12 hours 1, 1 day 4, 2 days 5, 3 days 6, 4 days 7, 5 days 1, 7 days 5, 8 days 2, 9 days 1, 14 days 1, 21 days 1. This, if we mistake not, indicates a rapidity of progress somewhat exceptional in this disease, for it will be observed that 67 per cent. of the cases terminated fatally within four days.

It is chiefly to the weather that we look for the bar to the continued spread of this disease, and the present cool breeze, fresh from the Atlantic, will, we trust, prove itself the much-desired reliever.

THE criticism of Dr. H. R. Storer on Dr. Johns' paper on chloroform as an anæsthetic in labor, calls for a word of comment from us. Dr. Storer seems to think the paper was published without a just impression of the nature of its contents. We wish to say, then, that we regarded it as a strong argument against the use of chloroform as an anæsthetic on any occasion. On a careful examination of it, we find the author quotes from no less than thirty-four members of the profession, some of them men of high authority in obstetric matters (witness such names as Montgomery and Ramsbotham), opinions and statements adverse to its use in labor.

The author also quotes numerous and important statistics. And although we know the maxim "figures cannot lie" is a fallacious one, yet they do often tell a most appalling truth. In the present instance we do not feel disposed to enter into a discussion of their value, but leave the proper appreciation of them to the thoughtful reader.

Next, it is evident that Dr. Johns, in attacking chloroform, attacks

the whole practice of the use of anæsthetics in labor. Now as this process is in Europe almost universally identified with the use of chloroform as the agent, we do not attach much importance to this charge, inasmuch as, with our present knowledge, the harder the blows dealt at that dangerous and fatal drug the better we like them. We do not consider the question of the propriety of the use of anæsthetics in natural labor as by any means definitely settled. We know there are many physicians who are very averse to their use, and we know that we have not been able to use that which is most commonly employed in America, sulphuric ether, in some cases in our own hands. Dr. Storer claims that chloroform is *the anæsthetic par excellence* for obstetric use, and we are told that he unfolded his views on this question in his paper read at the last annual meeting of the Massachusetts Medical Society. We look for its publication with much interest.

In quoting Dr. Johns on the subject of the comparative danger of tedious and rapid labors, by leaving out a portion of the paragraph Dr. Storer changes its meaning radically. We trust this omission was through inadvertence. Here are the two paragraphs:—

Dr. Johns says: "We very frequently see better and safer recoveries after tedious and painful than after rapid and painless labors, and the latter are not the less likely to be seriously complicated; indeed, in former days, when, happy for the parturient female, chloroform was unknown, and when meddlesome midwifery was strongly reprobated, such an opinion was entertained."

Dr. Storer quotes him as saying: "We very frequently see better and safer recoveries after tedious and painful than after rapid and painless labors, and the latter are not the less likely to be seriously complicated; indeed, in former days, happy for the parturient female, such an opinion was entertained."

It will be seen that the words "happy for the parturient female" refer to the period *when chloroform was unknown and meddlesome midwifery was strongly reprobated*, not to the prevalence of the opinion referred to. The words in italics are omitted by Dr. Storer. In quoting from another who is the subject of severe criticism, too great accuracy cannot be observed.

As for Dr. Storer's strictures upon and criticism of Dr. Johns, we leave them for the consideration of our readers without comment. From among the very numerous titles appended to his name over the article as it originally appeared in the *Dublin Quarterly*, we selected that which we thought would carry with it the most weight, and affixed it in our copy, including in a comprehensive &c. a number of honorable designations, which we did not think it necessary to print. We must be pardoned for thinking that a man in such a position cannot be justly regarded as a spectator "outside the ring," to borrow Dr. Storer's figure, who has no right to enter the arena, or express an opinion about the contest.

Our readers will be struck with the general tone of Dr. Storer's paper, reflecting as it does, even in the title, most severely upon the Editors of this JOURNAL. We do not care to enter into a personal discussion, but feel bound to say, that we are not yet convinced that Dr. Johns' paper is not worthy of the most careful consideration, and as such suitable for a place in our pages. We are not his champions, and there are undoubtedly portions of the paper open to just criticism:

he probably is able to defend himself. In the present state of our knowledge we regard it on the whole, as we said before, as having great weight as an argument against the use of chloroform as an anæsthetic.

THE CULTURE OF FISH.—At the Royal Institution on Friday, April 17th, Mr. Frank Buckland gave an admirable lecture “On the Artificial Incubation of Fish.” The Duke of Northumberland presided. The speaker, who made no pretence to eloquence, did not fail to instruct and amuse a crowded audience by his clear, often humorous descriptions, enthusiastic manner, and plain, easy, unaffected diction. On the table in front of Mr. Buckland were shown a variety of boxes of different kinds, but all of the simplest forms, in which on a bed of clean gravel, and beneath a shallow stream of water, the eggs of trout, salmon, perch, &c., in various stages of development, were being hatched. He began by considering the eggs. Fish are the most productive of all living creatures. A good fowl will lay 120 eggs in a year; but he had found by experiment that a salmon or trout produces 1000 eggs to every pound of its weight. It follows that a salmon of from 15 to 30 pounds would contain from 15,000 to 30,000 eggs; a trout of 1 pound, 1008 eggs. A turbot of 8 pounds has been found to contain 385,200 eggs; a roach of $\frac{3}{4}$ pounds, 48,000; a mackerel of 1 pound, 86,220; a brill of 4 pounds, 239,755; a sole of 1 pound, 134,466; a perch of $\frac{1}{2}$ pound, 20,592; a herring, 19,840; a Jack of $4\frac{1}{2}$ pounds, 42,840; and a cod of 15 pounds, the enormous number of 4,872,000 eggs. And yet we have to pay from half a guinea to a guinea for a turbot. Any one would think that with this fecundity we have only to let them alone, and fish would cultivate themselves; but this is not the case. We find that only one in every thousand of trout becomes a fish. A fish at the time of spawning seeks out a convenient place in which to deposit her eggs, and covers them over with earth or gravel. Will these 15,000 or 30,000 eggs then become fish? If so, why should salmon be from 1s. 6d. to 2s. per pound? The salmon seeks shallow water because nature teaches her that shallow waters are the best for hatching her eggs. The salmon-leaps are one kind of difficulty she meets. These we help her over by means of ladders, or an arrangement of alternate stages. The fish soon find out the water staircase, and flock to the spot, in preference to attempting the passage elsewhere. Again, we have to provide against accidents at the time of spawning, perhaps a flood on the one hand, which would wash the eggs away, or a drought on the other, which would be equally destructive. Again, the fish will eat their own eggs. Trout and salmon do so. Five hundred eggs have been found in the maw of a trout, and afterwards hatched. Among insects, we may count as enemies water-shrimps, the larva of the dragon fly and of the May fly. Some birds, the water-ousel and the dabchick, had been accused of robbery of the spawn, but the lecturer had proved them innocent. They came to feed on the insects, and, so far from being destroyed, should therefore rather be preserved. A bird that did a vast deal of mischief in the way of devouring spawn was the swan. He was a great poacher. The common house-rat, too, would get at the spawn and eat it. And then there were the human poachers, who would catch the parent fish, and send the “old soldiers,” i. e., the spent, scabby, diseased fish to

France, where they found a ready market. When a salmon had gone through all these perils, to the age of fourteen months, it went to sea, and there on the margin of the salt water it met with a fresh host of voracious enemies, of whom the most destructive was the angler fish. He feared there was no safeguard against these depredations. But we might materially increase the number of those that left the river by guarding against the former causes of loss, by hatching the spawn themselves, by the removal of nets and other obstructions which hindered the ascent of the fish, and by seeing that the water was not unnecessarily poisoned by the refuse from manufactories. For the first purpose the only plan was to make an artificial nest either out of doors or indoors. All that was required was a common box for out-door hatching, or for indoors an earthenware basin fitted with a series of glass tubes, or a series of zinc boxes, a slight layer of gravel that had been boiled to free it from the insects that might otherwise hurt the spawn, a shallow stream, and a continuous current. The temperature of the water should be from 40° to 45° ; and when the spawn was in it must be let alone. There was a great art in letting things alone; and if the spawn was not let alone it was sure to die. Thirty to thirty-five days were sufficient to develop the eggs, and the fish broke through the eggs with very large eyes to enable them to see their enemies and keep out of their way, with no mouths when they first emerged, but with a large umbilical sack or bag attached to their bodies, which contained the albumen of the egg, and which was gradually absorbed into the body of the fish, until it grew big enough to have a mouth to feed itself. This would be in eight or ten days. They had all heard of Mr. Youle's efforts to introduce salmon into Australia, and in the course of the experiments on the best way of preserving fish spawn they had kept the eggs on a block of ice for ninety days, and the eggs were still alive. Another batch had been thus kept for fifty-nine days, and were still as good and as much alive as on the day the fish laid them in the water. It was a most important discovery in what he might justly call the science of artificial incubation, for it showed that by taking such precautions the salmon-spawn might be transmitted to Australia safely, and they meant to do it. For comparatively shorter distances—as in the case of some spawn of grayling and some trout he had received that very evening from France and Switzerland—it was only necessary to put the fresh spawn in bottles, and carefully pack the bottles in boxes of damp moss. For the rest, to hatch them, all that was wanted was a box of cleaned gravel, an equal temperature, and a stream of running water from an inch to an inch and a half deep. As to the mode of treatment of the newly-hatched fish, they might first be kept in a pond and fed with liver. They will eat almost anything. In France the system of hatching fish-spawn had been carried on most extensively by the Government, and with enormously beneficial results. They had there hatched no less than 6,000,000 eggs, and re-stocked thousands of acres of their rivers. The Thames Angling Preservation Society wished to stock the Thames, and had placed boxes at Hampton, and Mr. Ponder, who had been one of the first to lead the way in this admirable scheme, had this year turned out into the Thames many thousand salmon. Some people said that they would never get these fish back. That might be true or not, and he hoped not, but at all events it was worth trying; and it, at least,

was certain that they would never get them back if they did not first put them in. They could put the young fish into the river at the rate of four for a penny, and Mr. Ponder would altogether turn nearly 70,000 fish of different kinds into the Thames this year. Looking at it only with a view to money profit, this system of artificial hatching would prove largely remunerative to lake and river owners. The annual value of the salmon imported from Ireland was no less than £330,000, and from Scotland as much as £500,000. All England only produced salmon to the value of £30,000 a year, and Yorkshire was so poor in this noble fish that he was told all the rivers in that large county only furnished to the value of £128 per annum. It was therefore no mere scientific plaything that was proposed to the owners of these fisheries, but a source of money value to them, which he was sure they would be only too glad to avail themselves of when the immense advantages of the system were pointed out to them. During the course of the lecture, the progress of the fish in its various stages of development in the egg up to an age of four or five days was most fully illustrated by means of a microscope and the electric light, which threw the image of the objects magnified on a white canvas screen suspended for the purpose. Some of these illustrations were exceedingly interesting, every movement in the ova being distinctly visible; and, in the case of the young fish, its rapid breathing, and even circulation of the blood over the umbilical sac and downwards towards the tail, could be detected. The activity of these formidable young monsters—for so they appeared when magnified—on their approaching or touching each other, created a great deal of amusement, and added not a little to the difficulty of keeping them in the field of view at all. —*London Medical Times and Gazette.*

INCONTINENCE OF URINE.—Mr. Robert Johns communicated to the Surgical Society of Ireland (April 10, 1863) the following cases of incontinence of urine, which are particularly interesting from the causes producing the affection, and from the novel and successful treatment:

Case I.—Some years since, a medical friend sought my assistance under the following circumstances:—Mrs. B. sent for him, and stated that she should be obliged to get rid of her housemaid, whom she highly prized, unless he could cure her of an infirmity from which she had been suffering for upwards of a year, which was not only highly detrimental to her property, but most distressing to the girl herself. She was a strong, robust, healthy country girl, aged 25 years, of a plethoric habit, and was unable to retain her urine at night, which commenced to flow off involuntarily as soon as she became warm in bed, and continued to do so incessantly until she rose in the morning. My friend employed assiduously for two months every known treatment, but without the least benefit to his patient. He could not assign any cause for her malady, none of those laid down by writers having existed. However, on inquiring more particularly from herself, I discovered that about fourteen months previously she had had a bad fever, during which, on several occasions, her urine was retained, and on each was passed off by means of warm fomentations, but that the retention had eventuated in her then present complaint. I then recommended that a metallic catheter should be introduced each night into the bladder, and there retained for a quarter of an hour. At the expi-

ration of a week from my visit, the doctor informed me that his patient was quite well, the catheterism having removed the incontinence, some benefit having resulted to her after the first introduction of the instrument.

Case II.—During the winter of 1861, Mrs. B., aged 30 years, of a strumous diathesis, called upon me, and stated that she could not retain her water for a minute, but that she was always worse at night, when she became warm in bed. She was the mother of one child (a male), which was still-born after a very tedious labor, requiring the use of destructive instruments for its completion. About the fourth day after the birth of her child her water began to pass off involuntarily, and had continued to do so for some years, but that about six months before her visit to me she had been cured of a very bad vesico-vaginal fistula (after six plastic operations) which had originated the incontinence. Having found on examination per vaginam and by the catheter, that the urethra and neck of the bladder were rough and highly irritable, every second day for three weeks I passed a metallic instrument into the bladder, and retained it there on each occasion for from ten to fifteen minutes, at the same time giving her each night a pill containing half a grain of extract of belladonna and four grains of dried soda. Under this treatment her distressing complaint was removed, and at the termination of the period just stated she was able to retain her urine as well as she ever did at any time of her life.—*American Jour. of Med. Sciences from Dublin Med. Press.*

THE LYING-IN HOSPITAL OF ROME, *San Rocco*, is connected with the Foundling Hospital, and consists of one great hall and several chambers, one of which is appropriated to births. It was originally established in 1500, with fifty beds, partly for medical and partly for surgical cases; it was, however, changed from its original destination and converted to its present purpose by Clement XIV. in 1790. It has at present from thirty to forty beds, each bed having a curtain and screen, so that the occupants are not seen by the others. All who apply are received without any questions being asked; some with their faces covered with veils, which they are not required to remove. On the register they are only known as guests at a hotel, by their number. No one is allowed, unless by special permit, to enter the hospital, except the physicians, nurses and attendants. Many are received at a considerable period before their confinement, so that their condition may not be suspected by their friends. If able to pay a small sum, they have superior accommodations; and when they are well enough to leave the institution they pass out by a passage in the rear, through an unfrequented street, and thus escape all danger of detection. If they wish to reclaim their children at some future time, some distinguishing mark is put upon them. But the children generally are sent to San Spirito. Usually patients are received only a few days previous to delivery, and they remain, on an average, about one week after confinement. It is supported partly by its own revenues and partly by the State, like the other public institutions of Rome.—Prof. CHARLES A. LEE in *American Medical Times*.

THE OLDEST MARRIED COUPLE IN THE WORLD.—There are living at Marulan, in this colony, says the *Sydney Empire*, two persons, husband

and wife, aged 111 and 107 years. The former has entered upon his 112th year, and the latter upon her 108th. They are extremely feeble and bedridden, but are in possession both of sight and hearing. They were able to move about until lately, and formerly were extremely active in their habits.—*Medical Record of Australia.*

LARGE FEES.—"Mr. Thompson, the surgeon who recently performed an operation on the King of the Belgians, has," says the *Journal de Bruxelles*, "received a fee of 100,000 francs and the Cross of Commander of the Order of Leopold." Prof. Scanzoni has also just received the sum of 30,000 francs for his attendance upon the Empress of Russia during her confinement.

DR. SNOW, of Providence, in his last monthly report, states that there were 89 deaths in that city in July, which number was 32 more than in the month preceding; 28 more than in July, 1862, and 7 more than the average for July during the last seven years.

WE would call the attention of our readers to the advertisement in our advertising pages of the Boylston Prize Questions for the next two years. We hear that the successful essay of the present year, by Dr. Damon, is one of very great merit; we shall look for its publication with much interest.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 15th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	75	66	141
Ave. mortality of corresponding weeks for ten years, 1853—1863,	56.9	50.3	107.3
Average corrected to increased population	00	00	118.4
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
14	2	3	2	0	2	3	46

NOTICE.—Part 47 of Braithwaite's Retrospect was mailed from this office on the 18th inst. to the members of the Massachusetts Medical Society who have paid their assessment for the year 1863. Members who have paid and do not find the book at their post offices, are requested to forward their vouchers to the Librarian, care of David Clapp, Medical and Surgical Journal office, 334 Washington St., Boston.

DIED.—In this city, 15th inst., David Roberts, M.D., aged 36 years.—At New Orleans, August 5th, of typhoid fever, Dr. W. Wainwright, Surgeon U.S.A.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 15th, 141. Males, 75—Females, 66.—Accident, 6—apoplexy, 2—disease of the bowels, 1—inflammation of the bowels, 5—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 1—burns, 1—cancer, 1—cholera infantum, 46—cholera morbus, 2—consumption, 14—convulsions, 4—croup, 2—cyanosis, 1—debility, 2—diabetes, 1—diarrhoea, 4—diphtheria, 2—dropsy, 3—dropsy of the brain, 3—dysentery, 2—exhaustion, 1—scarlet fever, 2—typhoid fever, 3—infantile disease, 5—inflammation of the lungs, 2—marasmus, 8—paralysis, 3—peritonitis, 1—sunstroke, 1—thrush, 1—unknown, 7.

Under 5 years of age, 87—between 5 and 20 years, 11—between 20 and 40 years, 21—between 40 and 60 years, 13—above 60 years, 9. Born in the United States, 118—Ireland, 19—other places, 4.

MEDICAL JOURNAL ADVERTISING SHEET

ALBANY MEDICAL COLLEGE.—Two full courses of lectures are delivered annually in this Institution. The *Spring Course* commences on the *second Tuesday in February*, and the *Fall Course* on the *first Tuesday in September*. Each course continues sixteen weeks. Degrees are conferred at the close of each term. Fee for full course, \$65. Graduation fee, \$20.

Materials for dissection are abundant, and furnished to Students on a reasonable terms as at any similar Institution in the country. A spacious Hospital has been opened nearly opposite the College, to which Students are admitted free of charge.

Weekly Cliniques are held in the College. Boarding, from \$2,50 to \$3,50 per week.

ALDEN MARCH, M.D., Prof. of Principles and Practice of Surgery.

JAMES McNAUGHTON, M.D., Prof. of the Theory and Practice of Medicine.

JAMES H. ARMSBY, M.D., Prof. of Descriptive and Surgical Anatomy.

HOWARD TOWNSEND, M.D., Prof. of Materia Medica and Physiology.

CHARLES B. PORTER, M.D., Prof. of Chemistry and Medical Jurisprudence.

JOHN V. P. QUACKENBUSH, M.D., Prof. of Obstetrics and Diseases of Women and Children.

J. V. P. QUACKENBUSH, Reg'r.

Albany, May 8, 1862. *tf*

GARDNER'S PERMANENT SOLUTION OF FERRO-PROTOXIDE OF IRON.—The attention of the Medical Profession is called to this novel and eminently successful preparation of Iron. It is becoming so well known, and so generally used, although but a short time before the public, that it has already taken its place among the standard preparations of the day. It contains 40 grains of Ferri Protoxide to the fluid ounce, and is prepared in two forms—bitter and sweet; the former the result of a combination of a vegetable tonic, Quassin, containing no *Iannin*, whereby a precipitate of Tanate of Iron is avoided with the mineral. The rapidity with which this article is assimilated is really surprising, usually producing observable effects in chlorosis in from three to six days.

Jersey City, N. J., Jan. 27, 1863.

I am familiar with the medicinal properties of the preparation known as Gardner's "Liquor Ferri Protoxide," having prescribed it in numerous cases since its first introduction to the profession.

It is an elegant preparation, combining in the most convenient and efficacious form, the well-established medicinal virtues and properties of iron.

Of its place and power as a remedial agent, I claim for it the *very first* in those peculiar conditions of the system which demand the administration of this mineral.

I could cite many cases, but deem it unnecessary, believing that all it requires is a fair trial to be fully appreciated by an enlightened profession.

CHARLES TAGGART, M.D.

No. 114 Wayne St., Jersey City.

Albany, N. Y., Jan. 21, 1863.

I have used Gardner's Solution of "Protoxide of Iron" in my practice, and I think it a very valuable preparation, superior to any preparation in use.

BAR. P. STAATS, M.D.

The following has been received from Dr. J. V. P. Quackenbush, Surgeon-General of the State of New York.

Surg. General's Office, Albany, May 2, 1863.

I have used the solution of the Protoxide of Iron, which you prepare, and am much pleased with the result. I deem it a most excellent preparation, and as such would recommend it to the profession.

Respectfully yours,

J. V. P. QUACKENBUSH.

Manufactured solely by the proprietor, **ROBERT W. GARDNER**, Druggist and Chemist, Jersey City, N. J. **JOSEPH WATSON**, General Agent, 31 Park Row, N. Y. Wholesale Agents for Boston, S. M. COLCORD & Co., cor. Hanover and Portland sts. July 31.—6m.

I. BARTLETT PATTEN'S CAMPHORATED SAPONACEOUS DENTIFRICE—For cleansing the Teeth and removing the Tartar, for cooling the Mouth and purifying the Breath, and giving tone and vigor to the Gums.

It is invaluable in habitual Toothache.

This Powder is prepared with great care by a peculiar process, and forms a pure and efficacious Dentifrice. Made only by **I. BARTLETT PATTEN**,

Apothecary, 27 Harrison Av. c. Beach st., Boston.

Je4—tf

TO PHYSICIANS! HALL'S PATENT CONSTANT BATTERY.—Patented June 21, 1859. Expressly designed for Physicians' use.

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GALVANIC APPARATUS for medical uses, manufactured and for sale by **Thomas Hall**, 13 Bromfield st., Boston. All the most approved Electro-Magnetic and Magneto-Electric portable machines, as well as constant current batteries for galvanism, made or imported to order, by Mr. Hall. Reference, by permission, to A. C. Garratt, author of "Medical uses of Electricity."

The just celebrity and success of *Hall's Patent Constant Battery*, has induced several persons to manufacture inferior articles, which, in many cases, are a direct infringement on this Battery; the public are respectfully cautioned against the imitations, as they will be found comparatively worthless and ineffectual. May 7-1y.

TRUSSES.—Dr. Riggs's Hard Rubber Multipedal Truss. Water proof. Used in bathing; cleanly and indestructible. No. 2 Barclay street, New York. Aug. 14-ly

VACCINE VIRUS.—The Subscriber proposes to furnish (by mail, postage free) Vaccine Virus, of *guaranteed freshness, purity and efficiency*, to physicians in all parts of the United States and Canada, at the following rates:—12 quills (prepared in such a manner that the *lymph cannot chip off*), \$1.00. Recent crusts (resulting from the drying of perfect, unruptured and uncomplicated vesicles), securely mounted in gutta percha, so that they can be used with great facility and without breaking or waste—small, but perfect, each \$1.00; very large and fine, each \$2.00.

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Roxbury, Mass.

References.—Dr. Walter Channing, Boston; Dr. Oliver Wendell Holmes, Boston; Dr. R. D. Mussey, Boston; Dr. Henry Bartlett, Roxbury; Dr. Dixi Crosby, Hanover, N. H.; Dr. Josiah Crosby, Manchester, N. H.; Dr. Gilman Kimball, Lowell, Mass.; Dr. S. W. Thayer, Burlington, Vt. June 7-1y

IMPROVED SPERMATORRHOEA RINGS—of pure silver, for preventing and curing nocturnal emissions. Price \$3—to physicians, \$2. They can be sent by mail in a letter. Also, a large assortment of elastic, glass and metal Syringes, Breast Pumps, Nursing Bottles, &c. &c., for physicians' and family use. Sold by **E. M. SEIXNER**, successor to J. RUSSELL SPALDING, 27 Tremont street, opposite the Museum, Boston, Mass. March 19.

DR. H. R. STOREY has resumed practice in Boston, attending only to the diseases of women. Office at Hotel Pelham. Dec. 4—tf.

MEDICAL JOURNAL ADVERTISING SHEET.

BOYLSTON MEDICAL PRIZE QUESTIONS.
—The Boylston Medical Committee, appointed by the President and Fellows of Harvard University, consists of the following Physicians:

EDW. REYNOLDS, M.D.	J. MASON WARREN, M.D.
JOHN JEFFRIES, M.D.	D. H. STORER, M.D.
S. D. TOWNSEND, M.D.	CHAS. G. PUTNAM, M.D.
J. B. S. JACKSON, M.D.	MORRILL WYMAN, M.D.
HENRY J. BIGELOW, M.D.	

At the annual meeting of the Committee on Wednesday, Aug. 5th, a premium of Ninety Dollars, or a Gold Medal of that value, was awarded to HOWARD FRANKLIN DAMON, M.D., for the best dissertation on "*Leucocythemia*."

The following questions are proposed for 1864:

1. On the Treatment of Fractures without Splints.
2. The Remittent Fever now prevailing in the United States Army.

Dissertations on these subjects must be transmitted, post paid, to Edward Reynolds, M.D., on or before the First Wednesday of April, 1864.

The author of the best dissertation considered worthy of a Prize for 1864, will be entitled to a premium of Ninety Dollars, or a Gold Medal of that value.

The following questions are proposed for 1865:

1. Recent Advances in Ophthalmic Science.
2. Pyæmia.

Dissertations on these subjects must be transmitted as above, on or before the First Wednesday in April, 1865.

The author of the best dissertation considered worthy of a prize on either of the subjects proposed for 1865, will be entitled to a premium of Ninety Dollars, or a Gold Medal of that value.

Each dissertation must be accompanied by a sealed packet, on which shall be written some device or sentence, and within which, shall be enclosed the author's name and residence. The same device or sentence is to be written on the dissertation to which the packet is attached.

The writer of each dissertation is expected to transmit his communication to the Chairman of the Committee, in a legible hand-writing, within the time specified.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within one year after they have been received.

By an order adopted in 1828, the Secretary was directed to publish annually the following votes:

1st. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.

2d. That in case of publication of a successful Dissertation, the author be considered as bound to print the above vote in connection therewith.

J. MASON WARREN, Sec'y.

Publishers of Newspapers and Medical Journals throughout the country are respectfully requested to notice the above.

Aug. 20—eop3t

ELIXIR BARK AND PROTOXIDE OF IRON.
The difficulties in the way of isolating and protecting from change the proto-salts of iron, and also in combining them with the active medical principles of Peruvian bark, led physicians to apply to us to attempt the accomplishment of both these desirable ends. It is now nearly three years since this pleasant and highly efficacious combination was placed in their hands, together with the formula for its manufacture; and it has become a favorite tonic and chalybeate with thousands in all parts of the country. It has proved of the highest efficacy in a wide range of diseases, and its use seldom disappoints the expectation of the physician. The numerous diseases in which it is serviceable are so obvious, it is deemed unnecessary to name them. The iron, a proto-salt, is in perfect solution, and this with the bark alkaloids is so combined as to form a pleasant aromatic elixir, without any ferruginous taste. It contains but a small amount of syrup, so objectionable to many patients.

Prepared only by JAS. R. NICHOLS & CO.,
Aug. 20—tl. Chemists, Boston.

VACCINE VIRUS FROM KINE.—One crust, 10 quills, 1 capillary tube—each \$1. Large quantities furnished. This virus is preferable to that in common use, and is warranted.

References given. Address
EPHRAIM CUTTER, M.D.,
Woburn, July 13, 1863. Woburn, Ms.
Jy. 16—tl.

A GRADUATE in Medicine of the University of Edinburgh, Scotland, and Licentiate of the Royal College of Surgeons of that city, is anxious to obtain a situation as Assistant to or Partner with a medical practitioner in the city of Boston. Besides the above named Degree and Diploma, he possesses a large number of testimonials of the highest character from the Professors of the Edinburgh Medical School.

Having come over to this country with the view of seeing practice, he has been acting in the capacity of a U. S. A. Medical Officer since the beginning of the present year, and is at present Surgeon in charge of a Military Hospital in Pennsylvania. He has obtained high testimonials from the Army Medical Department, which, along with those from Edinburgh, may be seen at this office, where application may be made for any further information, &c.

Aug. 20—tl.

ACETIC CANTHARIDAL VESICANT.—This preparation will be found to be the most certain and convenient vesicant yet devised. It differs essentially from the colloidone, inasmuch as it does not contract the cuticle in drying, operates in less time, and with but little pain. It is a liquid, and may be applied to the parts desired to blister with a camel's-hair pencil, and then the surface covered with oil-cloth or clean linen. It will blister in from thirty minutes to two hours, according to susceptibility of patients. Prepared only by

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Aug. 20—tl. Chemists, Boston.

PARKER'S COMPOUND VEGETABLE OIL AND PATENT VENTILATING NIPPLE SHIELD, for the cure of Chapped or Sore Nipples. This mode of treating sore nipples was introduced to the public more than five years since, and has been successfully tried by many physicians of Boston who kindly permit Mr. P. to refer to them. The compound is perfectly harmless, and its taste so agreeable that the infant never shows the least repugnance in nursing. For sale by

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Aug. 20—tl. Druggist and Chemist,
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ACETIC CANTHARIDAL RUBEFACIENT.—This preparation is designed to produce rubefacient effects upon the skin, and may serve instead of mustard poultices and other slight counter-irritants. The parts may be painted with the liquid, one coating usually being sufficient. If the epidærmis is tender, it may blister if allowed to remain over night. It should remain from one to four hours in most cases, and then be removed with ether or warm water. Prepared only by

JAS. R. NICHOLS & CO.,
Aug. 20—tl. Chemists, Boston.

MEDICAL INSTITUTION OF YALE COLLEGE.—The Course of Lectures for 1863-64 commences on Thursday, September 17th, and continues seventeen weeks.

JONATHAN KNIGHT, M.D., Prof. of Surgery.
WORTHINGTON HOOKER, M.D., Prof. of Theory and Practice of Medicine.

BENJAMIN SILLIMAN, JR., M.D., Prof. of Chemistry and Pharmacy.

PLINY A. JEWETT, M.D., Prof. of Obstetrics and Medical Jurisprudence.

CHARLES A. LINDSLEY, M.D., Prof. of Materia Medica and Therapeutics.

LEONARD J. SANFORD, M.D., Prof. of Anatomy and Physiology.

Matriculation, \$5. Lecture fees, \$68.50. Demonstrator's Ticket, \$5. Graduation, \$15.

CHARLES A. LINDSLEY, M.D.,
Dean of the Faculty.
New Haven, July 22, 1863. Jy 30—2m.

OPHTHALMOSCOPES—modified from those of Anagnostakis and Jaeger, by JOHN H. DIX, M.D. For sale by CODMAN & SHURTLEFF,
Sept. 1—tl. 13 Tremont st., Boston

THE
Boston Medical and Surgical Journal

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THE BOSTON MEDICAL AND SURGICAL JOURNAL.

EDITED BY

SAMUEL L. ABBOT, M.D., AND JAMES C. WHITE, M.D.

Whole No. 1852.] Thursday, August 27, 1863. [Vol. LXIX. No. 4.

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HARVARD UNIVERSITY.

MASSACHUSETTS MEDICAL COLLEGE.

THE annual course of Medical Lectures of Harvard University will commence at the Massachusetts Medical College, in North Grove st., Boston, on the first Wednesday of November, 1863. The regular course will be as follows:—

Obstetrics and Med. Jurisprudence	by Professor D. HUMPHREYS STORER, M.D.
Morbid Anatomy	by " JOHN B. S. JACKSON, M.D.
Clinical Medicine	by " HENRY I. BOWDITCH, M.D.
Anatomy and Physiology	by " OLIVER W. HOLMES, M.D.
Theory and Practice of Medicine	by { PROFESSOR GEORGE C. SHATTUCK, M.D., and Adj. Prof. CALVIN ELLIS, M.D.
Surgery	by Professor HENRY J. BIGELOW, M.D.
Chemistry	by " JOHN BACON, M.D.
Materia Medica	by " EDWARD H. CLARKE, M.D.
Demonstrator,	DAVID W. CHEEVER, M.D.

Clinical Medical and Surgical Instruction will be given at the Massachusetts General Hospital, with Surgical Operations.

Collateral special medical instruction will also be given at the Hospital by Lectures and otherwise, by Drs. Bowditch, Abbot and Ellis.

Abundant material is afforded for the study of Practical Anatomy. The Room devoted to this department is open day and evening, and lighted by gas.

Fees for the Lectures, \$85; Matriculation fee, \$3; Graduation fee, \$20.

Good Board can be obtained at \$2.50 to \$5.00 per week. Boarding places provided on application to the Janitor at the College.

Students are requested, upon coming to Boston, to call upon the Dean.

D. HUMPHREYS STORER, *Dean of the Faculty,*

Aug. 6, 1863—tL

No. 132 Tremont St., Boston.



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The fact that nearly 4000 persons are now wearing the "Palmer Leg," testifies to its superiority over all others. The "Great Prize Medal" was awarded to it in London over thirty-five competitors from all parts of Europe.

The "Palmer Artificial Leg" is lighter than any other, yet capable of sustaining a continuous pressure of over 500 lbs. It is more natural in its movements. It more closely resembles the natural leg, it being impossible to distinguish it. It is more durable, wearing for years. It requires less repairs. It can be afforded for a less price. Nine out of ten of the most celebrated Surgeons in all parts of the world recommend the "Palmer Leg" in preference to all others.

All pretended improvements over it are simply theoretical notions, intended to deceive. The extended reputation of this invention is a sure guaranty to the patient, that in procuring the "Palmer Leg" they will secure the best, and run no risk.

The patient is enabled to walk immediately upon its application. It is applied to the shortest and tenderest stumps with perfect success.

The Surgeons of the Massachusetts General Hospital recommend this invention over all others.

Pamphlets, giving full information, sent gratis to all who apply.

General Manufactory for all the New England States, is at 19 Green street, Boston. Address—

PALMER & CO.,
19 Green street, Boston.

Sept. 18.

LOCUST-GROVE RETREAT, PEPPERELL, Mass.—The premises formerly occupied by the late Dr. CUTTER for an Asylum, and known for a long time as the first and one of the most desirable retreats in the State for nervous invalids, is now in the possession of the subscriber. New buildings have been erected, in which the rooms made for the purpose are large and pleasant, and all the arrangements are with a special view to the comfort of the patients. Few towns furnish better surroundings for such an establishment than Pepperell, with its quiet, careful and beautiful village, its social influences, genial and Christian, its clear, healthful atmosphere, its charming drives and walks, and picturesque scenery. Persons suffering from chronic disease, epilepsy, or from nervous affections, will find here all the comforts of home. The attention of those who have friends suffering from habits of inebriation is especially called to this retreat, where the treatment of these cases is made a specialty. No efforts by way of treatment, family influences and moral inducements will be spared to reclaim such and restore them to their former position in society. J. C. SHATTUCK, M.D.

REFERENCES.

Rev. E. P. Smith, Rev. J. A. Buckingham, Hon. C. W. Bellows and Charles Tarbell, Esq., of Pepperell.

Winslow Lewis, M.D., A. Emerson, Esq., Boston. Josiah Bartlett, M.D., Concord, Ms.

John E. Tyler, Sup't McLean Asylum, Somerville. JUNE 17th, 1863. Jc23-11.

BOUTQUET D'HAVELOCK—A delicate, rich and enduring Extract for the mouchoir, distilled from a choice combination of fresh flowers, equal if not superior to any of the perfumes of the celebrated Lubin. For sale only by

I. BARTLETT PATTEN,
Druggist & Chemist,

27 Harrison Avenue, Boston. Price 37 and 62 cts. per Bottle. Feb. 7

UNIVERSITY OF NEW YORK—MEDICAL DEPARTMENT.—Session 1863-64. The Session for 1863-64 will begin on Monday, October 19, and will be continued until the first of March.

Faculty of Medicine.

Rev. ISAAC FERRIS, D.D., LL.D., Chancellor of the University.

VALENTINE MOTT, M.D., LL.D., Emeritus Professor of Surgery and Surgical Anatomy, and Ex-President of the Faculty.

MARTYN PAINE, M.D., LL.D., Professor of Materia medica and Therapeutics.

GUNNING S. BEDFORD, M.D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Midwifery.

JOHN W. DRAPER, M.D., LL.D., Professor of Chemistry and Physiology, President of the Faculty.

ALFRED C. POST, M.D., Professor of the Principles and Operations of Surgery, with Military Surgery and Hygiene.

WILLIAM H. VAN BUREN, M.D., Professor of General and Descriptive Anatomy.

JOHN T. METCALFE, M.D., Professor of the Institutes and Practice of Medicine.

WM. H. DONAGHE, M.D., Demonstrator of Anatomy.

Besides daily Lectures on the foregoing subjects, there will be five Cliniques weekly, on *Medicine, Surgery and Obstetrics*.

The Dissection-Room, which is refitted and abundantly lighted with gas, is open from 8 o'clock, A.M., to 10 o'clock, P.M.

Fees for a full Course of Lectures, \$105; Matriculation fee, \$5; Graduation fee, \$30; Demonstrator's fee, \$5.

* The usual Spring, Summer and Autumn Course will begin on Monday, March 23, and will be continued till the Winter Session commences. This course is free to those who attend the Winter Session—others pay \$30.

Ad. 9—1antO.



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ARTIFICIAL LEGS. "PALMER'S PATENT," IMPROVED, superior in mechanism, adaptation and utility; which also perfect Improved Surgery at the Ankle-Joint (Simes), and Knee-

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By E. D. HUDSON, M.D.

Astor Place, Clinton Hall (up stairs), New York.

Send for Pamphlets and References.

Aug. 6—1y

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From Pereira's *Materia Medica*, Vol. II., Part II. page 223.

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THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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No. 4.

THE RELATIVE VALUE OF AMPUTATION, AND OF ATTEMPTS TO PRESERVE THE LIMB, IN GUN-SHOT FRACTURE OF THE THIGH; AND SOME CONSIDERATIONS ON THE OPERATION OF DISARTICULATION AT THE HIP-JOINT.

[Translated from the "Traité de Chirurgie d'Armée," par L. Legouest, Médecin Principal d'Armée, Professeur de Clinique Chirurgicale à l'Ecole Impériale (Val de Grâce), &c. Paris. 1863.

BY DAVID W. CHEEVER, M.D., BOSTON,

FIRST PAPER.

THE original results obtained by the collation of statistics by Dr. Legouest are sufficient of themselves to render his conclusions noteworthy and valuable: while his facilities for observation in his high position in the Medical Corps of the French Army guarantee their accuracy. No further explanation is therefore required for submitting them to the readers of the JOURNAL. We would only remark that the results deduced from the statistics of wounds and surgical operations are not liable to so many sources of fallacy as purely medical ones, though none can be considered infallible.

TRANSLATION.

All fractures of the thigh by gun-shot wounds have been, for a long time, considered by the majority of surgeons to demand imperiously the amputation of the limb. Ribes propounded this rule as an absolute one; and his opinion, supported by those of Ravaton, Percy, Larrey, Dupuytren, Bégia, Baudens and others, acquired the force of a law in military surgery, although some of the distinguished surgeons whom we have just named had fortunately departed from the principle laid down by themselves. Yet Fournier-Pescay, a contemporary of Ribes, wrote in 1813, "It is at the present epoch of military surgery that we have succeeded in curing gun-shot fractures of the thigh occurring in the shaft of the bone. J. L. Petit had never seen one cured; amputation was always performed under such circumstances. The author of this article cured five; three of whom were in the military hospital at Brussels, in

1794. He had, before this period, attended General Schinner, who recovered perfectly." Ribes himself, returned to the *Invalides* after the campaigns of Russia and Saxony, was very much astonished to see admitted to the *Hôtel*, between the years of 1814 and 1822, seven soldiers who had had the femur fractured in its middle, and who had recovered without amputation. Isolated facts, observed in the field, and others, more numerous, collected during the periods of civil disorder, had already shaken the convictions of surgeons, when Malgaigne declared in the Academy of medicine, that he repudiated, for his part, the doctrine of amputation, and that adding his own experience to that of others, he had determined to attempt the preservation of the limb. The contradictory statements put forth on this subject demanded new researches. Since that time, Hutin, one of the successors of Ribes at the *Hôtel des Invalides*, resumed the investigations which that surgeon had begun; and the author of this book instituted the inquiry as to the relative proportion of recoveries after fracture of the thigh, treated, on the one part by amputation, on the other by the preservation of the limb, during the Crimean campaign. Hutin found at the *Hôtel des Invalides*, from 1847 to 1853, a considerable number of old soldiers who had comminuted gun-shot fractures, which had not been amputated.

With the femur fractured at the lower fifth	.	.	.	10
" " " " lower third	.	.	.	8
At the middle third, below the middle	.	.	.	1
At the middle	.	.	.	20
At the middle third, above the middle	.	.	.	7
At the upper third	.	.	.	7
With the femur fractured at the upper fourth	.	.	.	6
" " " in the neck or trochanters	.	.	.	4
Total				63

Which gives:—

Fractured below the middle third	.	.	.	18
" in the middle third	.	.	.	28
" above the middle third	.	.	.	17
Total				63

Or again:—

Fractures at the middle of the femur	.	.	.	20
" below the middle	"	.	.	19
" above the middle	"	.	.	24
Total				63

The fractures at the middle and below the middle of the femur are each a little less than a third of the total number; and the fractures above the middle are a little more than a third of this

number. At the same time there were 21 invalids with amputation of the thigh:—

For comminuted fracture of femur, lower fifth	.	.	.	10
" " " lower third	.	.	.	6
" " " in the middle	.	.	.	5

Total 21

There was no case of amputation of the thigh for gun-shot fracture above the middle of the femur. This peculiarity, if it be not accidental, which it is difficult to believe, is to be accounted for probably because the amputations high up on the thigh have been fatal. These figures show that of 84 gun-shot fractures of the thigh at the *Invalides*, between 1847 and 1853, 63, or three fourths, had been treated without amputation, and 21, or one fourth, by amputation; but they do not give the proportion in which the wounded with fractures of the thigh recovered, according as they were amputated or not.*

My researches on amputations of the thigh in consequence of gun-shot wounds show that during the eastern campaign, 1664 soldiers submitted to amputation of the thigh for various injuries of the lower extremity, including fractures of the femur; while 337 soldiers, suffering from fractures of the thigh, were treated by preserving the limb.

Of the 1664 amputated, 123 recovered.

" " 1541 died.

Total 1664

The 337 fractures of the femur, treated without amputation, give:

Recoveries	117
Deaths	220

Total 337

Whatever its cause may be, the first fact which strikes us in the results of amputations of the thigh, compared to the fractures of the femur treated without amputations, is that the amputations gave five times less recoveries than the fractures not amputated. It is allowable to suppose that if the 1664 amputations of the thigh had been all operated on in consequence of fractures of the femur, their chances of death or recovery would have been unaltered; and accepting this supposition, it results that in the Army of the East the chance of recovery from amputations was:—

At the upper third of the thigh 6 per 100.

" middle third " " 6 per 100.

" lower third " " 10 per 100.

* So, also, in the "Consolidated Statement of Gun-shot Wounds" in the U. S. Hospitals, for four months of 1862, there were 749 gun-shot fractures of the femur, of which 269 were amputated, 27 excised and 453—more than half—were treated without operation. Unfortunately, the comparative results are not given.

while the chance of recovery without amputation, was for fractures:

Of the upper third of the thigh 31.5 per 100.

“ middle third “ “ 31.75 per 100.

“ lower third “ “ 42 per 100.

We do not attribute to these figures absolute certainty; but we think they allow us to establish an approximate ratio between the success of the treatment of fractures of the thigh without amputation and the success of treatment of these fractures by amputation.

This ratio is:—

For the upper third of the femur, as 31.5 is to 6.

For the middle third of the femur, as 31.75 is to 6.

For the lower third of the femur, as 42 is to 10.

In a general way, the proportion of the whole 117 survivors of the 337 wounded, not amputated, is 35 per 100; that of the whole 123 survivors of the 1664 wounded, amputated, is 7.4 per 100. The ratio of these totals is as 35 to 7.4: in other words, in the war of the Crimea, the men treated for fractures of the thigh by preserving the limb, recovered in a proportion about five times greater than the men treated by amputation of the thigh, for any traumatic injury of the lower extremity whatever.*

It is rather remarkable to see that these figures, if they do not exactly agree with the results of Hutin, lead at least to analogous conclusions; although, as we have already said, the figures given by Hutin are not comparative, and that the excess, at the *Hôtel des Invalides*, of men not amputated over the amputated may depend on this, that those amputated, walking well and being able to satisfy their needs, do not enter the *Hôtel*; while those not amputated, preserving a limb more or less useful and sometimes the seat of secondary accidents, come there to seek a living and better nursing.

However it may be, the last campaign in Italy (1859), for which the return of wounds has not yet been settled, has left an impression in the minds of a great number of surgeons, that gun-shot fractures of the thigh do not always require amputation. For our own part, we have seen in the hospitals at Bergamo, Brescia and Milan, some facts of this kind, the number of which we do not dare to state precisely, for fear of giving figures which might prove erroneous.

If, in the considerations which we have just presented, we have

* In the United States Hospitals in 1862, the mortality of amputations of the thigh was as follows:—

Amputations of the lower third, 119.	Deaths, 62.
“ “ middle third, 129.	“ 65.
“ “ upper third, 64.	“ 45.
312.	172.

Giving a ratio of mortality for

The lower third about 50 per cent.

The middle third about 50 per cent.

The upper third about 66 per cent.—[Op. cit., Table 4.

not absolutely established the truth, we think we have arrived at probabilities, which many surgeons will not hesitate to admit. This point of practice, in respect to military surgery, demands, perhaps, more observations, which, we hope, will be followed out, and will corroborate our own. We will conclude by saying, that, under good circumstances, that is to say in the case of simple fractures without extensive loss of osseous substance, when the wounded man need not be transported, and is placed in a wholesome locality, and provided with every material and surgical resource, amputation may be postponed; under opposite circumstances, amputation should be performed.

Hip-joint.—Experience has proved that in cases of fracture of the neck or head of the femur, amputation ought not to be done immediately. Jubiot discovered first this exception to the general rule, which prescribes that amputations recognized as indispensable should be performed at once. More recent works, and particularly my “Memoir on disarticulation at the hip-joint in military surgery,” and the review of this work by H. Larrey, have proved, that all disarticulations of the hip done early have been followed by death. It is easy to be convinced of this by glancing at the following table.

Disarticulations at the Hip-joint for Gun-shot Wounds.

IMMEDIATE OPERATIONS.

Surgeons.	No. Operations.	Recoveries.	Deaths.
Larrey. Clinique Chirurgicale.	6	..	6
S. Cooper. Dictionnaire.	2	..	2
Letulle. Relation du siege d'Anvers.	1	..	1
Hutin. Memoires.	2	..	2
Sédillot. Annales de Chirurgie.	5	..	5
Guyon. Expédition de Charchell.	1	..	1
Richet. Journées de Juin, 1848.	1	..	1
Jubiot. These de Montpellier.	3	..	3
Armée d'Orient (Crimée).	9	..	9
Totals,	30	..	30

MEDIATE OPERATIONS.

Larrey. Clinique.	1	1	..
Guthrie. Clinique de Larrey.	1	1	..
Baudens. Traité des Plaies, &c.	1	1	..
Wedemeyer. Bulletin.	1	..	1
Robert. Journées de Juin.	1	..	1
Guersant. Idem.	1	..	1
Vidal. Traité de Pathologie.	1	..	1
Mounier. Constantinople, 1854.	3	..	3
Legouest. Idem.	1	..	1
Totals,	11	3	8

ULTERIOR OPERATIONS.			
Wedemeyer. Op. cit.	1	..	1
Browig. 12 Decembre, 1812.	1	1	..
Clot-Bey. Marseille, 1830.	1	..	1
	<hr/>	<hr/>	<hr/>
Totals,	3	1	2*

If we add to these figures the primary disarticulations of the hip-joint performed in the Crimea by the English Surgeons, which are seven in number, we find that not one of the thirty-seven wounded, operated on immediately, survived: that nearly three-fourths of those who underwent a secondary operation, succumbed: and that two-thirds only of those operated on at a remote period, died. H. Larrey, in his review of my memoir, confirms by additional observations the opinion which we have expressed, namely; that immediate disarticulation at the hip-joint ought only to be undertaken when the limb is almost separated from the trunk.

It is proper to inquire if the same reservation ought not to be applied to gunshot fractures of the upper third of the femur. We have found that the proportion of recoveries among the amputations of the thigh in the Crimea, was

At the upper third, 6 per 100.
 " " middle third, 6 per 100.
 " " lower third, 10 per 100.

while the proportion of recoveries without amputation was, for fractures,

Of the upper third, 31.5 per 100.
 " " middle third, 31.75 per 100.
 " " lower third, 42 per 100.

The medical and surgical history of the English Army during the same campaign, gives the following proportion of recoveries, after amputations of the thigh:

At the upper third, 8.2 per 100.
 " " middle third, 47.7 per 100.
 " " lower third, 50 per 100.

Finally, Ribes and Hutin have not found at the *Invalides*, a single case of amputation of the thigh, above the middle of the femur.

Amputation of the thigh at the upper third of the femur is then one of the most serious operations, which, according to the above statistics, gives a mean of only 7.1 per cent. of recoveries.

If, in fractures of the head and neck of the femur, the immediate amputation of the limb ought to be absolutely postponed for a later operation, for a resection, or even an attempt to preserve the member, perhaps it would also be better not to amputate immediately in the case of a fracture of the upper third of the femur, but to attempt a cure without mutilation, or to amputate only at a remote period.

* "U. S. Gun-shot Wounds," *op. cit.*, gives two disarticulations at the hip-joint for gun-shot wounds; both mediate operations, and both fatal.

EUROPEAN OPHTHALMIC INSTITUTIONS. No. III.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—In continuing my account of the present state of ophthalmic medicine in Europe, I shall venture, at the risk of being tedious, to say a little of some institutions less known to fame, but not without certain special excellencies of their own, and well worthy of a brief notice.

Spain is not wholly destitute of practitioners who have made themselves acquainted with diseases of the eye and their proper treatment; but, as a rule, I am inclined to think the members of the Profession, in this, as in respect to the general practice of medicine, fall below the average standard attained by those of neighboring countries. Spain itself is in arrears, as regards civilization; but is evidently awaking to a consciousness of this fact, since the recently commenced introduction of railways, and is making strenuous efforts to regain a position in the front of the march of nations. But time must yet elapse before the proud lethargy of centuries can be recovered from.

It is evident that diseases of the eye, exist to a large extent, in many parts of Spain. The explanation of this it is not difficult to find in the climate and in the habits of the lower classes. It is a peculiar country. Divided by ranges of mountains, the included spaces form vast table lands almost destitute of water except when the Spring freshets rush furiously across them to the sea. These table lands are exposed, during the dry season, to an almost tropical sun, but at the same time are liable to be swept by sudden blasts of cold winds from the snow-covered peaks. Under the former scorching influences the roads, in a country where rain does not fall in the Summer, become almost rivulets of dust. The dark interior and brightly-whitewashed outside of the houses, in a large proportion of the villages; the fact that the smoke from the herbs used, as almost his sole fuel, has ample time to fill the house and the eyes of the peasant before finding its way out at the hole in the roof designed for its exit; the neglect of personal cleanliness, rendered almost a necessity by the scarcity of water—may all have their influence in creating a sensitive condition of the eyes. When the peasant goes from his ill-lighted hovel into the bright glare, to be exposed to clouds of dust and blasts of cold, it is not to be wondered at that catarrhal inflammation of the conjunctiva should be the frequent result, or that existing, it should often be aggravated by the same causes to most serious degrees.

Large numbers of cases may be seen in many small places in the country, and in passing along the highways, and the numerous blind petitioners for charity, both in city and country, indicate much neglect or bad management. I saw less of it in some almost Moorish towns, and I am told that it is rare to see a Moor, in his own coun-

try, with inflamed eyes; although, as we know, ophthalmia is so common in Egypt.

Rome has an eye infirmary of considerable size and charmingly situated, supported by the munificence of Prince Torlonia, and under the care of Dr. Mattoni. The surgical and medical treatment of a large number of cases seemed to be exceedingly judicious and successful. I found the Doctor, like other Italian practitioners, a warm advocate for the old Italian method, revived by Mons. Desmarres, of treatment of fistula lachrymalis, and even of chronic inflammation of the sac, where no fistula exists, by destruction of the sac, either by the actual cautery or by caustics. Subsequent caries of the bone, however, rendering the cure tedious and unsatisfactory, seemed to me to be an unpleasantly frequent sequel.

No physician should leave Rome without having visited the great Hospital of Santo Spirito. In the season of autumnal fevers it sometimes contains three thousand patients, and the number is at all times very large. Professor Valery's pleasant courtesy will never be forgotten by those who have made his acquaintance, and his perfect knowledge of English and French renders him able to make interesting explanations of the management of the hospital and treatment of the patients, to such strangers as may be at fault in regard to the Italian language. The museum of this hospital contains a very large number of instructive preparations—among which may be mentioned, as especially valuable to the student, the numerous carefully elaborated specimens exhibiting the pathological anatomy of the different forms of hernia, showing the exact relations of the sac to the contiguous parts—and many preparations of various aneurisms, at different stages of development—forming, together, a complete picture of the disease.

Turin has a very large new ophthalmic hospital, favorably placed on a part of the space formerly covered by the citadel, which is now being demolished. It is intended as a self-supporting institution, a certain proportion of the patients paying a moderate sum, which will defray the expenses of the free beds. It is under the charge of Professor Sperino, whose opinions in regard to the treatment of cataract without operation have attracted so much attention. His plan consists in the evacuation of the aqueous humor, repeated daily, or even oftener, for a long period. He regards his method as best adapted for hard cataract, as he considers the soft form indicates more complete degeneration of the lens. The theory on which he bases his treatment, is, that cataract is the result of choroidal congestion which is relieved by paracentesis. He claims for his plan, efficacy, not only in preventing incipient cataract from becoming complete, but in effecting resolution of opacity which has already reached an advanced degree. It will be easy, by accurate observations as to the acuteness of vision, according to the method of Prof. Donder, to test the actual results arrived at; so as on the

one hand not to reject any method which might render one of the capital operations of less frequent necessity, and, on the other, not to accept a plan which would open a wide door to abuses if not really of unquestionable service. I had opportunities of observing the application of this mode of treatment, not only to a large number of cases of cataract, but in many inflammatory affections of the eye, in some of which evacuation of the aqueous has long been admitted to be of value.

Prof. Sperino is also a strong advocate for the destruction of the lachrymal sac when affected with chronic inflammation. This he effects by a caustic preparation of zinc inserted through an incision in the skin. After a few days, the partially disorganized sac is forced out by strong pressure.

The memory of Scarpa is still deservedly cherished and his authority appealed to, by the oculists of Italy, and perhaps no modern writer has contributed more to the advancement of ophthalmic science than he accomplished in his time. His clear and concise descriptions might even now serve as models; and his labors should not be forgotten, for to him we owe much of the foundation which furnished so firm a base for what has since been added.

Truly yours,

H. W. WILLIAMS.

Berlin, Prussia, 9th July, 1863.

OXALIC ACID FROM SAWDUST.

At the last Pharmaceutical Meeting, Edinburgh, Dr. Murray Thomson, F.R.S.E., read a paper on Mr. Dale's new method for the manufacture of oxalic acid.* The idea of making oxalic acid by acting on sawdust with an alkali was not quite new on the part of Mr. Dale, as in 1829 M. Gay-Lussac published a memoir, in which he announced that M. Vauquelin had converted pectic acid into oxalic acid, by heating the former along with caustic potassa in a crucible. M. Gay-Lussac followed up this discovery by a number of experiments, in which he demonstrated that when a number of substances were treated with potassa they yielded oxalic acid. Among the substances he tried were cotton, sugar, starch, and gum. Any of them, when heated with caustic potassa or soda, gave off hydrogen gas, while the mixture charred; and at length oxalate of potassa or soda was found in the black residue, and could easily be dissolved out of it.

Gay-Lussac tried a number of the vegetable acids, and showed that these might be converted into oxalic acid without charring of the mixture ensuing, and on that circumstance he tried to form an explanation of the process.

But although the memoir of Gay-Lussac had been published for

* Reported in Pharm. Journal.

twenty years, no one had proposed using it as a source of oxalic acid on the large scale until Mr. Dale did two or three years ago. And although Gay-Lussac was the first to broach this method of making oxalic acid, it must not be thought that his memoir showed a way by which this result might be obtained free of obstacles; for Mr. Dale found that there was more than one practical difficulty to be overcome before he reached a successful issue. One of the chief of these was that Mr. Dale did not find the sawdust, when heated with caustic soda, was converted into oxalate of soda, as Gay-Lussac would imply. He says that soda or potassa may be used indifferently, but Mr. Dale found that with soda sawdust yielded almost no oxalic acid; while, on the other hand, he was precluded from using potassa on the large scale on account of its high price, though he was quite successful when he used it. At last this difficulty was overcome by using a mixture of soda and potassa, in the proportion of two equivalents of the former to one of the latter; and this, it was found, was as effective as potassa alone. The practical details of the process are as follows:—

1. The alkalies, mixed in the above proportion, are dissolved, and the solution evaporated until of specific gravity 1.35; sawdust is now stirred in until a thick paste results.

2. This paste is then heated on iron plates, during which it is constantly stirred; water is first given off; the mass then swells; inflammable gases, hydrogen and carburetted hydrogen are evolved, along with a peculiar aromatic odor. When the temperature has been maintained at 400° for one or two hours, this stage of the process is complete; the mass has now a dark color, and contains only 1 to 4 per cent. of oxalic acid, and about 0.5 per cent. of formic. The bulk, therefore, of the mass at this stage consists of a substance whose nature is not yet known, but which is intermediate between the cellulose and oxalic acid.

3. The next stage consists in a single extension of the last, in which the mass is heated till quite dry, care being taken that no charring takes place. It now contains the maximum quantity of oxalic acid, 28 to 30 per cent.

4. This oxalic acid is now combined with both potassa and soda in the grey powder resulting from stage 3. This powder is now washed on a filter with solution of carbonate of soda, which seems to have the singular and unexpected power of decomposing the oxalate of potassa, and converting it into oxalate of soda. At all events, it is quite true that all traces of potassa are washed out with the solution of carbonate of soda. The only explanation that occurs to account for this unusual decomposition is that oxalate of soda is a more insoluble salt than oxalate of potassa, and therefore may be formed by preference.

5. This oxalate of soda is now decomposed by boiling milk of lime. Oxalate of lime falls as a precipitate, and soda remains in

solution. This soda is boiled down, and again made use of with fresh sawdust. This recovery of alkali is also practised with the potassa salt which filters through in the last stage.

6. The oxalate of lime is now decomposed in leaden vessels with sulphuric acid. Sulphate of lime is precipitated, and oxalic acid is in solution, which is now evaporated, and the acid separates in crystals, which now need only to be recrystallized to make them quite pure, and fit the acid for all the purposes for which it is employed.

By this ingenious process, two pounds of sawdust are made to yield one pound of oxalic acid, and the amount of acid which can be turned out in a week amounts to nine tons; but the works of Messrs. Roberts, Dale & Co. (near Manchester), could make nearly double that amount. This amount is more than half of all the oxalic acid which is reckoned to be used all over the world. The process also has so much cheapened the price of oxalic acid, that in 1851 it sold for 16*d.* per pound, and now it only costs from 8*d.* to 9*d.* per pound.—*Am. Jour. of Pharmacy from London Chemist and Druggist.*

PERMANGANATE OF POTASH AS A DISINFECTANT.

DR. PLOSS speaks in the highest terms of the disinfecting power of this substance. It effectually removes all smell from the most stinking suppurating sores and discharges. Most remarkable results of this kind have followed its injection, repeated several times a day, in cases of cancer of the uterus—half a drachm to eight ounces of distilled water being a good proportion. In the case of open wounds and ulcers, all the dressings covering them should be moistened with the solution. No means succeeds more rapidly than this in removing the disagreeable smell of the hands after the performance of autopsies, for which purpose a stronger solution (3 ss ad ʒ j.) may be employed. It is far superior to chlorine in its effects, which are not, as is the case with that substance, fugitive. For this reason it is a superior prophylactic, applied to the hands of accoucheurs, to chlorine in puerperal fever. In ozæna it is strongly to be recommended, the solution (ʒ ss ad ʒ viii.) being introduced into the nares by means of a caoutchouc syphon. In bad smells of the mouth, resulting from carious teeth, it is an admirable means, a little cotton wool being moistened in a weak solution. Finally, the permanganate is to be recommended as a wash for stinking feet. This remedy deeply stains linen it comes in contact with, but the spots may be removed by means of the sulphate of iron.—*Am. Druggists' Circular from Varges' Zeitschrift, N. S., vol. i., p. 187.*

Bibliographical Notices.

"Consolidated Statement of Gun-shot Wounds."

A PAMPHLET of a dozen pages, and bearing the above title, has just been issued from the office of the Surgeon General of the U. S. A. It contains a series of statistical tables, showing the number, variety and results of gun-shot wounds treated in the army hospitals during the months of September, October, November and December, 1862. These have been made up from the returns of 167 hospitals, "reports from others, obviously inaccurate, having been excluded as unreliable." As there are upwards of 225 General Hospitals in the United States, the records of a large number must have been thrown out, and in questions of statistics like the present, this fact suggests the inquiry where and how the limit between accuracy and inaccuracy has been drawn or determined. We are sorry to learn that, previous to September last, "the surgical statistics of the war are absolutely worthless;" but glad to find it asserted that, from measures since adopted, better results are anticipated, and more definite returns, both as to the nature of wounds and their final results, are to be hoped for in the future. Any one who has had practical experience in Army Hospitals, will readily appreciate the difficulties which the statistician at Medical Headquarters must experience. The transfer of patients from one Hospital to another, so constantly, and, to the surgeon in charge, oftentimes so unexpectedly occurring, is mentioned as the greatest difficulty to be encountered in the preparation of these tables, and one, it seems to us, which must be the constant source of unavoidable error and confusion. Any attempt, too, to include in the history of the wounded the cases of the deserted, the discharged, or the furloughed, (except such as return at the expiration of their leave of absence, as a large proportion of them do not,) and who, operated on at their homes, or in Civil Hospitals, die, or are finally discharged in their respective States, must render the data, so far as results are concerned, of little real value. If we can learn the true history of a given number of wounded—and, in such a war as we are engaged in, this must of necessity be a large number—feeling sure, as we scan the figures, that no uncertainties have been allowed to creep in for the sake of swelling the aggregate, the present rebellion cannot fail to furnish one of the most valuable contributions to Military Surgery which has yet emanated from any country. We all know the efforts which are being made to this end by Surgeon General Hammond, and into what competent hands he has entrusted the immediate supervision of this duty. Discrepancies will creep into the most carefully prepared tables; they are to be found in the great "Blue Book" Medical and Surgical History of the Crimean War, and Dr. Brinton can hardly expect to walk unspotted through the labyrinth of figures, which must so sorely try and vex his patience. We propose to give an idea of the tables contained in the pamphlet which has suggested these remarks, and to indicate some of their most striking features.

Table No. I is a "Statement of gun-shot wounds treated in the U. S. A. General Hospitals during the months of September, October, November and December, 1862, showing the number returned to duty, furloughed, deserted, discharged, died, and remaining under treatment

Jan. 1, 1863." This Table is subdivided under the heads of "Flesh wounds," "Wounds of Cavities," "Gunshot Fractures," "Wounds of Joints," "Contusions and Injuries by spent balls," and "Miscellaneous." The whole number of wounded is 20,930. From its figures we learn that of 495 "wounds of the lungs" 192 died, 112 were discharged, 7 deserted, 17 were furloughed and 4 were exchanged as prisoners, 163 remaining under treatment. We find also, with some surprise, that of 19 "wounds of the stomach," 6 were discharged, 1 furloughed, 7 remained under treatment, and that 5 only had died. Of 72 "wounds of the intestines," 4 were discharged, 9 deserted, 2 furloughed, 14 remained under treatment, and 43 died.

Table No. II. shows the treatment, under the three heads "Amputation," "Excision," "Simple dressing," of 20,429 of the cases contained in table No. I.

Table No. III. is perhaps the most remarkable of all, as it undertakes to account, in 18,554 cases, for the character of the missile inflicting the wound, i. e. whether "round bullet," conical bullet," "shell," "round shot," or "other missile," under which last head only 514 cases are registered. In 16,352 cases, the injury is positively referred to either a conical, (10,798 cases,) or a round bullet, (5,554 cases). Now as by table No. VI. it appears that in but 604 cases bullets were extracted, it seems as if but little reliance could be placed on table No. III., for the difficulty in deciding the nature of gun-shot wounds, *quoad* the missiles inflicting them, is well known to be in the majority of cases insuperable. After a thoroughly careful investigation of the whole subject, Legouest says, "I do not hesitate to assert that, in the majority of cases, it would be impossible for the most experienced military surgeon, or the most accomplished expert in legal medicine, to discriminate between the effects of round and conical bullets with sufficient certainty to enable him to designate positively the form of the projectile which has produced them."

Table No. IV. contains a statement of Amputations and their results. In Dr. Brinton's letter to the Surgeon General, accompanying this report, he says, "the results of injuries of the different thirds of the thigh were not obtained by the issue of the first edition of the sick report," this edition being the one on the exhibit of which the tables given are said to be collated. Yet in table No. IV., the results of *amputations*, under the separate heads of the different thirds, are distinctly given. The following table will show the results of these operations:

Point of amputation.	No. of Cases.	Deaths.	Under Treatment.	Percentage of Deaths.
Lower third.	119	62	42	52.1
Middle third.	129	65	54	50.4
Upper third.	64	45	14	70.3

These figures represent a better degree of success than has usually been attained in military practice, but then it is to be observed how large a proportion of cases still remain under treatment.

Owing to the importance of the subject, and to furnish some information on the subject, Dr. Brinton gives, on page 4, a table showing the number of gun-shot fractures treated by "amputation," "excision," and "simple dressing," during the first quarter of 1863, together with those remaining under treatment (75 in number) Jan. 1st,

1863, the figures being "extracted from the April reports now in process of compilation." We give below the table thus referred to :—

	Total No. of cases.	Amputation.	Excision.	Simple dressing.	Treatment not stated. Probably simple dressing.	Returned to duty.	Furloughed.	Discharged.	Died.	Remaining under treatment Apr. 1, 1863
Upper third.	103	22	2	53	26		1	25	24	53
Middle third.	143	46	1	83	13	1	2	41	26	73
Lower third.	137	35	3	85	14		9	38	25	65
Total.	383	103	6	221	53	1	12	104	75	191

The slight difference in the mortality of injuries at the lower and middle third, as shown by this table, is noticeable.

Table No. V. has reference to the Excisions which have been performed. Under the head of "Jaw," and the context leads us to suppose that the temporo-maxillary articulation is meant thereby, we have a total of 16 operations. At the knee, 9 cases, with 8 deaths and one under treatment. At the hip, 16 cases, with 9 deaths and 7 under treatment. Between this table and Nos. I. and II., we find a want of accordance in the numbers. Nor are we able to account for the difference, since in No. II., which states the whole number of operations, we find but 8 cases of excision of the hip-joint, and in No. V., which shows the results, we have a total of 16 cases. In table No. I. also, the number of injuries of the hip-joint is stated at 146, whilst in No. II., which shows the method of treatment, the total of cases is 155.

Table No. VI. enumerates details as to the extraction of balls.

Table No. VII. shows the results of Trephining, viz., 35 operations, of which 32 were secondary, 28 terminating fatally and 2 being under treatment. Of the 5 cases which recovered, 4 were secondary operations and one was primary.

Table No. VIII. has reference to the Ligature of Arteries. From this it appears that of 86 ligatures of different vessels, 42 terminated fatally, 11 were discharged, 2 returned to duty, 1 deserted and 30 remained under treatment. Of 2 instances of ligature of the common carotid, 1 proved fatal and 1 was discharged. Of 2 of ligature of the subclavian, 1 died and 1 was discharged. Of 15 ligatures of the brachial, 4 proved fatal, 3 were discharged, 1 returned to duty, 1 deserted and 6 remained under treatment. Of 4 ligatures of the external iliac, 3 terminated fatally and one remained under treatment. Of 38 ligatures of the femoral, 26 were fatal, 2 were discharged and 10 remained under treatment. In this table also is included an instance of the successful ligation of the internal jugular vein.

Table No. IX. refers to miscellaneous operations and contains no facts of special interest.

Nothing reveals more impressively the magnitude of the battles which we have been fighting than a comparison of the tables which we have above hastily described, and which give the number of wounded in our hospitals during a period of only four months, with the tables which show the number of wounded in the French and English

armies during the Crimean campaign. In the entire war, which covered parts of three years, the English, with an effective force of 97,864 men, had an aggregate of wounded amounting to only 12,164, and the French, with a force of 309,000, a total of wounded reaching but 39,868. In other words, the hospital accommodations required by the English during the whole Crimean war, would not have equalled the demands of either the battle of Shiloh, Antietam, or Gettysburg. What consideration may we not claim then, if the French offer their encumbered ambulances as an explanation of the mortality following their portion of the surgery in the Crimea, and when the most striking illustration of this is the statement that, at the assault on the Malakoff (Sept. 8, 1854), 4,472 wounded Frenchmen and 554 Russians were thrown upon their hands, and, in spite of all the activity which was displayed by the surgeons, that the necessary operations and dressings were not completed until Sept. 11th. At either of the battles we have named, there were double the above number of wounded Federal troops.*

Having noticed in this cursory way some of the salient points in the pamphlet before us, we would remark in conclusion, that what we are to look forward to, in a professional point of view, as the results of this rebellion, is not the statistical tables issued from medical headquarters and the conclusions derived from them, but rather the impressions and observations of intelligent and thinking men, who have labored and studied on the battlefield and in the hospitals, of Regimental Surgeons and Surgeons of Volunteers, who shall give their own unprejudiced experience, accumulated in the long days and nights which they have spent among the sick and wounded. Larrey, Guthrie, Hennen, McLeod, Stromeyer, Esmarch, Legouest, our best authorities hitherto, gained their ability to write as they have by actual service, and whilst the value of statistics, as to their collateral and confirmatory importance, is not to be depreciated, nor the faithful labors of those who work at them, no one but themselves knows how hard, to be too lightly estimated, still it is from the shrewd observing minds of those who have been able to endure through all the hardships of the rebellion, with their intellects clear and their energies unabated, that we are to expect the *practical* military surgeries, which shall place us, as we believe we are this day in fact, above and beyond all other powers in what appertains to the Art of Medicine in its relations to the Art of War.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 27, 1863.

MEDICAL COMMUNICATIONS TO THE CONNECTICUT MEDICAL SOCIETY AT THEIR ANNUAL MEETING FOR 1863.—These communications, seven in number, taken as a whole, reflect great credit upon the Society to

* At Gettysburg "the estimated number of wounded was, on Monday, July 7th (three days after the battle), 20,000 National and rebel soldiers. Of these, 6,000 were rebel wounded, deserted by all but five of their own surgeons."—*Letter of Dr. Bellows, Pres. San. Com.*

which they were addressed. They show a high standard of medical attainment in their authors, and give evidence that the profession at large aims at keeping up with the progress of our science the world over, at the same time that it is not indifferent to the questions which particularly interest us in our own country and at the present time.

The first paper is the Annual Address by the President of the Society, Dr. Josiah G. Beckwith, of Litchfield, on the "Dignity and Grandeur of the Medical Profession." The subject certainly is not a new one, and requires uncommon skill and ability on the part of the author to avoid being drawn into the most soporific of commonplaces. These qualities Dr. Beckwith has shown in this discourse, which any one may read with much pleasure and profit. The greater part of it consists in a condensed historical view of the medical profession from the earliest recorded times down to the present century, thus connecting it with a previous address, which gave a history of the progress of medicine during the present century. The address concludes with some just and dignified reflections on the whole subject of the position and duties of the profession, conceived in the best spirit and expressed in excellent taste. The whole paper is most creditable to its author and will be very useful for reference as a condensed historic summary of the growth and development of our science.

Article second is the annual dissertation before the Connecticut State Medical Society for the current year, by Dr. James C. Jackson, of Hartford. Its subject is "Logic applied to Medical Science," and consists in a brief exposition of the various steps which a student of medicine at the present day must pursue to place his investigations and deductions on a level with the researches and discoveries in the departments of physical science; the only way to a steady and permanent advance.

Article third is a vindication of Army Surgeons, by Dr. Ashbel Woodward, Surgeon 26th Connecticut Volunteers. This is a manly defence, by one who speaks from his own knowledge, of the large class to which he belongs, concerning whom the community have been too willing to listen to words of complaint rather than words of praise. Admitting the justice of many things that have been said in disparagement of some who, early in the history of the war, have held the responsible office of Army Surgeon, Dr. Woodward shows that such disparagement is by no means universally deserved, but on the contrary that the medical staff of the Army ought, in the main, to be held in the highest honor. He gives an interesting sketch of the peculiar difficulties of their position, and of the arduous and responsible duties belonging to it, and furnishes a very plausible explanation of many of the injurious reports which have been circulated from time to time with regard to particular surgeons. Of one source of such malicious rumors Dr. Woodward says:—

"Able-bodied soldiers, laboring under no trouble unfitting them for the service, often besiege the surgeon to obtain assistance in procuring discharges. After giving them a thorough examination, he declines to become a party to any such scheme. The disappointed applicant takes revenge by denouncing the officer who has frustrated his villainy. Distant friends are written to, and their sympathies enlisted. Where numerous coteries, scattered here and there over the land, accept one-sided testimony for truth, the aggregate of falsehood thus

believed and of injustice thus done, swells to fearful dimensions. The writer is happy to say that little of this querulousness and fault-finding, has fallen under his own observation. Extensive inquiries, however, have adduced a large amount of concurrent testimony — all tending to show that faithful surgeons as well as other officers have for the time being suffered in reputation, from the mis-statements of soldiers whom they have balked in their attempts, either to evade their duties, or to escape from the service. It is this complaining, petulant, excrescent portion of the army, including occasionally officers as well as privates — men who nowhere and never, even under the most favoring circumstances, discharge with zeal and alacrity the duties of a soldier — a class of persons with which every body of troops is more or less scourged—always a trouble in the camp and a burden then upon the hospitals—it is from such and such alone, that the competent and faithful surgeon suffers in reputation.”

The author concludes with a hopeful view of the present struggle, and, professionally, of the advantages likely to ensue in elevating the standard of surgical skill.

The next paper is on the use of “Calomel in Scarlatina,” by Dr. Ebenezer K. Hunt, of Hartford. The author advocates the use of this drug on the ground of its alleged power of controlling inflammatory action, promoting secretion and maintaining the healthy action of all eliminating surfaces and bodies. He attributes the frequency of troublesome sequelæ to this disease of late years to the disuse into which calomel has fallen. His method of treatment is as follows:—

“It becomes then eminently proper, if, the foregoing views are correct, to begin at the outset of the disease, with the use of this potent remedy. An emetic of ipecac, for which, if the arterial excitement is strong and the skin is hot and dry, tart. antim. et potassæ may be substituted, combined with from four to six grains of calomel for a child from four to six or eight years of age, may be given as soon as the disease becomes manifest. Nor, let me observe, would it in my opinion, be bad practice, even in those cases which at the outset are obscure and often simulate those ephemeral maladies to which childhood is so subject, to administer the combination just named, even though the result of the case should demonstrate that less active agents would have answered equally well. Time is often exceedingly precious in scarlatina; and upon the right beginning of its treatment frequently hinges the well-being, and life even, of our patients.

“To proceed: The use of the combination above named, will usually, thoroughly evacuate the stomach and also produce one or more alvine discharges; quickening at the same time, the actions of the entire glandular and follicular system. Its revulsive effect will also be salutary; tending, as it will, to secure and maintain cutaneous transpiration and a proper equilibrium of the circulation. Subsequently, the mercurial should be employed so as to move the bowels once or twice every twenty-four hours. This may be done by combining it in doses, say of gr. $\frac{1}{2}$ to be given every four hours, with some appropriate refrigerant or anodyne remedy, adding to this, morning or evening, or at both periods if found necessary, some two grains, to be given at a single dose. This will generally maintain, throughout the whole course of the disease, free secretory action

from all eliminating surfaces and keep the bowels in a sufficiently open and soluble condition.

"Cooling and febrifuge remedies, like *spt. æther. nit.*, the neutral or effervescing draughts, sponging the surface freely with cold or tepid water, and its free use as a drink, if preferred; also, such topical remedies as may be indicated, are all proper and often doubtless needful when the reaction is considerable, and should be used, as circumstances require.

"In those cases also in which the oppression of the brain and nervous system is well marked, but not extreme, and the reaction but moderate, I generally resort to an emetic, in conjunction with a few grains of calomel at the outset; and am governed subsequently by the degree of reaction which follows their use, as to the further continuance, as well as to the quantity of the latter."

Dr. Hunt does not give cases in illustration of his practice, and his statements and opinions therefore can only have the weight which those of any honest practitioner are entitled to in urging his own individual views.

Article fifth is on the "Physiology of the Crystalline Lens, or the adjustment of the eye to distinct vision at different distances," by Dr. Moses C. White, of New Haven. The subject is one of special interest and is attracting considerable attention at the present time. This paper is mainly made up of a translation from the work on Optics by M. Daguin, as his views coincide so exactly with those of the author and are at variance with the commonly-received opinions of English authors. The paper is a very interesting one, and concludes as follows:—

"These remarkable experiments remove all doubt about the action of the crystalline lens, and establish the position, that: The principal modification of the eye, to adapt it to distinct vision at different distances, consists in changes in the form of the crystalline lens; and it seems almost certain that these changes are produced by a vital contraction of the fibres of which the lens is composed — the fibres of the crystalline lens being endowed with the power of contracting and changing the form of the lens in obedience to the will."

Article sixth, a "Sanitary Report of Hartford County," is a carefully-prepared article by Dr. Lucian S. Wilcox, of Hartford, containing some interesting statistical information, together with a comparison of some recent anomalous cases of disease, with the recorded histories of the so-called spotted fever.

Article seventh is the history, by Dr. Moses C. White, of New Haven, of a strange surgical case in which a nail broken off in the foot spontaneously separated into twenty-six pieces, which were successfully removed from time to time, after intense suffering. The pieces were removed during the period of ten months. The paper is illustrated by a wood-cut showing the shape and size of the various fragments.

Next follow several biographical sketches of members of the Connecticut State Society deceased during the past year, together with the business records of the Society for the year, the whole concluding with a list of Surgeons and Assistant Surgeons appointed to the Connecticut Volunteer Regiments. The whole publication shows an active spirit in the Society and a desire on the part of its members to do their part in enlarging the domain of medical science.

IN a private note to the Editors, Dr. Walter Channing writes as follows:—

“Squibb’s ether seems to me to be the best and safest anæsthetic, and to accomplish all that ether and chloroform united might have done. I use ether now as freely as I did when my book on etherization was published, and with the same beneficial effects. Patients ask for, nay, beg for it and they get it. In one case, Squibb’s was used. I had eight ounces got. It was applied as Cologne water is to a handkerchief, in very small quantities. Mrs. A. called for it when uterine action was beginning. She was perfectly conscious of the contraction of the organ, but had not the least pain, and this continued till delivery occurred. The labor was as long as a good *first* labor ever is. Two ounces of the ether remained in the phial after its use ceased.”

Our experience agrees, in the main, with Dr. Channing’s. We have never felt there was any danger in the use of sulphuric ether as an anæsthetic in ordinary or complicated cases of labor, where there was sufficient expulsive action of the uterus. We have been obliged to suspend its use in some instances, where the uterine action was feeble, and the anæsthetic plainly interfered with the progress of the case; circumstances, such as an almost entire absence of liquor amnii, making it important that the labor should not be unnecessarily protracted on account of danger to the child.

We take the following extract from a paper by Dr. Flint on the treatment of Phthisis, read before the New York Academy of Medicine, from the report in the New York *Medical Times*.

“For convenience of analysis he arranges the cases in three groups. I. Those in which no curative or hygienic methods of management were employed. II. Those cases in which hygienic measures were employed. III. Cases in which remedial measures, including alcoholic stimulants, were supposed to have had a curative influence. I. In the first group seven cases are collected, of which four recovered entirely. II. The second group includes twenty cases, in twelve of which the recovery appeared to be complete, in eight the arrest of the disease was not followed by complete recovery within the period that the condition of the patients severally was known. The ages in this group ranged between nineteen and fifty years, and seventeen of these were males. In only four of the cases are there any grounds for supposing that climate had any curative influence. The most important point of agreement developed by the analysis of this group of cases relates to change of habits as regards exercise and out-door life, and the agreement in this respect is highly significant. III. The third group embraces thirty-five cases. Only one of these cases was treated with tonic remedies, exclusive of cod-liver oil and alcoholic stimulants. In four tonics were employed in conjunction with alcoholic stimulants, and in two tonic remedies were conjoined with cod-liver oil; alcoholic stimulants and cod-liver oil were employed conjunctively in eight cases. Stimulants, oil, and tonics were used in one case. The curative remedies employed were only three in number: cod-liver, alcoholic stimulants, and tonics of iron and quinine. In five of the thirty-five cases, the curative treatment consisted exclusively of cod-liver oil; in two of these the symptoms entirely

ceased. Of these thirty-five cases, in fourteen the curative treatment consisted exclusively in the use of alcoholic stimulants; of these fourteen cases of arrest, in nine the recovery was apparently complete. Generous living was inculcated and adopted as far as practicable in all the cases.

"The most striking and valuable of the results of the analytical study of these sixty-two cases is their almost uniform agreement as regards change of habits with respect to exercise and out-door life at the time of the arrest. Excluding the seven cases of the first class, and two in which the facts with respect to this point were not noted, of the remaining fifty-three, in all save three, the histories show a greater or less change of habits to have been made; and in many cases the change consisted in relinquishing sedentary callings for other pursuits, in order to carry out more effectually the desired reformation."

WE have received Lindsay & Blakiston's "Physician's Visiting List for 1864." The present issue has various additions and improvements on the previous editions, which materially increase its usefulness. The price is somewhat greater than in former years, and is now, for copies prepared for twenty-five patients, sixty-three cents and one dollar; and for fifty patients, seventy-five cents and one dollar and a quarter, according to the style of finish.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 22d, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	51	63	114
Ave. mortality of corresponding weeks for ten years, 1853—1863,	49.8	51.3	101.1
Average corrected to increased population	00	00	111.55
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
17	2	0	4	0	6	3	29

BOOKS AND PAMPHLETS RECEIVED.—The Pharmacopœia of the United States of America. Fourth Decennial Revision. By authority of the National Convention for revising the Pharmacopœia, held at Washington, 1860. Philadelphia. J. B. Lippincott & Co. 1863. —A Manual of Instructions for enlisting and discharging Soldiers. By Roberts Bartholomew, A.M., M.D., Ass't Surgeon, U. S. Army, &c. Philadelphia. J. B. Lippincott & Co. 1863. —The Nature, Causes and Treatment of Nervous Deafness. Translated from the French of "Duchenne." With additions. By Laurence Turnbull, M.D., Aural Surgeon to, and Lecturer on Aural Surgery at, Howard Hospital, Philadelphia. Philadelphia. Lindsay & Blakiston. 1863.

DIED,—In Dorchester, Aug. 22d, Dr. James W. Stone, 40.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 22d, 114. Males, 51—Females, 63.—Abscess, 1—apoplexy, 2—inflammation of the bowels, 1—ulceration of the bowels, 1—congestion of the brain, 3—disease of the brain, 4—cancer, 1—cholera infantum, 29—cholera morbus, 3—consumption, 17—convulsions, 7—croup, 2—debility, 1—diarrhoea, 3—diphtheria, 3—dropsy, 2—dropsy of the brain, 2—drowned, 2—dysentery, 6—typhoid fever, 3—hernia, 1—infantile disease, 4—intemperance, 1—jaundice, 1—disease of the liver, 1—inflammation of the lungs, 4—marasmus, 1—old age, 1—paralysis, 1—premature birth, 1—tubes mesenterica, 1—unknown, 3—whooping cough, 1.

Under 5 years of age, 62—between 5 and 20 years, 7—between 20 and 40 years, 20—between 40 and 60 years, 15—above 60 years, 10. Born in the United States, 75—Ireland, 31—other places, 8.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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THURSDAY, SEPTEMBER 3, 1863.

No. 5.

EUROPEAN OPHTHALMIC INSTITUTIONS. No. IV.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—I had hoped to find time, while at Berlin, to complete to that point my description of the eye institutions of Germany, but find myself again in arrears.

The school of Vienna has long been regarded as one of the most famous in the department of ophthalmology, a series of distinguished professors having occupied its chairs. Most of those who were there at my former visit had passed from the stage, but their places are most worthily supplied by their successors.

No city offers easier and more concentrated facilities than Vienna, for study in this, as also in other departments of medicine. Two of the principal clinics, those of Profs. Arlt and Jäger, are comprised within the walls of the great general hospital—a city, rather than a house, of the sick. Another equally interesting clinique is established at the neighboring large military hospital, under the care of Professor Stellwag von Carion. All of these gentlemen are well known by their published works; Professor von Jäger by an illustrated atlas of morbid appearances of the internal parts of the eye, as disclosed by the ophthalmoscope, and Professors Arlt and Stellwag von Carion by treatises on the pathology of the eye, both of great excellence, and of which the late edition of the latter's work is regarded as one of the best expositions of the present state of science as regards the diseases described.

As the hours are not the same at the different clinics, the student has an opportunity of first following the visit in the wards and seeing those who come for consultation as out-patients with Professor von Jäger or Stellwag, and also of witnessing their operations, and is afterwards in time to follow the same course in the wards of Professor Arlt. After his operations have been performed, Prof. Arlt adjourns to the amphitheatre to receive the out-patients, and takes great pains to exhibit and explain the cases of interest or those serving as types of different maladies. The manifest interest

exhibited by the Professor in the improvement of his pupils must be encouraging to them. After the consultation is finished, comes a lecture of more or less length, at the conclusion of which he gives a private course of operations to a class of young doctors of medicine. He had the kindness to invite me to be present at this course, and to do, himself, for my gratification, such operations as he did not find opportunities of performing upon patients in the wards.

This private course, as also that by Prof. von Jäger on the ophthalmoscope, are so highly valued as to attract pupils from all parts of Europe. Each member of the class has opportunities for repeating, over and over again, under the direction of the Professor, all the capital as well as the lesser operations on the eye and its appendages.

Among the out-patients are to be seen a very large number of Polish Jews, who exhibit the extreme of filthiness of person, and who live, as I learned, in close hovels, under very unfavorable hygienic conditions. Most of the affections for which they come for advice are cases of conjunctivitis, aggravated by neglect to an extreme degree. In the military hospital a large proportion of cases of purulent and catarrhal affections of the conjunctiva is also observed, as might be expected of this age and class of patients.

The general hospital of Prague occupies one of the best possible positions, on very high ground, where there is a free circulation of air, and commanding fine views of the picturesque city on the one hand and its charming environs on the other. It has a splendid ophthalmic department, under the care of Prof. Hasner. He is an exceedingly rapid and a very skilful operator, and evidently takes great pains in the clinical instruction of the pupils. Though the number of patients is less than at Vienna, it is still ample for all purposes of observation, and a student has certain advantages in an institution of this character which he loses in those of larger cities. He has opportunities for deliberate examination of patients and for obtaining explanations in regard to them, which are impossible where he is one of a crowd of learners; and, for a beginner, I think such a school as that of Prague is to be preferred, as affording even better instruction than he can gain at Vienna or Berlin. He has also opportunities for observing the after-treatment of cases operated on, which are not always afforded in large clinics where the rapid succession of events prevents too close surveillance of those which have preceded.

As the ancient capital of Bohemia, and being at a distance from the imperial city, Prague forms a centre which attracts to itself a large number of cases requiring operations, for the good results of which both the high reputation of Prof. Hasner, and the extremely favorable situation of the hospital, concur.

Prague is one of the most interesting cities of Germany; re-

markable for the picturesque effect of its numerous quaint towers and fortifications, the stateliness of its grand old edifices, and the beauty of its environs, and a residence there might pass very agreeably.

Truly yours,

H. W. W.

Utrecht, Holland, 20th July, 1863.

EMPLOYMENT OF POSITION IN CONTROLLING HÆMORRHAGE.

BY FRANCIS B. QUINLAN, M.D., TRIN. COLL. DUBLIN, MEDICAL ADVISER TO ST. VINCENT'S HOSPITAL.

PAIN, shock to the nervous system and hæmorrhage may be fairly considered the principal sources of immediate difficulty and danger in the actual performance of extensive surgical operations; and, as the all but universal employment of anæsthetic agents has, to some degree, neutralized the first two impediments, it may be of advantage to recur to a plan of diminishing venous hæmorrhage, which, employed and described in the year 1845, has since been frequently resorted to, although not always with due acknowledgment to Dr. O'Ferrall, of St. Vincent's Hospital, the distinguished surgeon by whom this plan was first devised. It will be admitted that, while most cases of arterial hæmorrhage are susceptible of comparatively easy control, there is scarcely any bleeding so rapid, so tremendous, or so alarming in its effects as that experienced in the removal of large scrotal tumors, when the enormous tortuous veins—usually found in connection with these growths—have been divided while in a state of repletion; and it is to guard against such hæmorrhage that the plan to which I have alluded is especially directed.

The accuracy of these statements will be easily established by a brief review of some operations of the kind which have been performed with and without having recourse to this plan.

In the first of these cases, a large scrotal tumor, weighing about fifty pounds, was removed by the late Mr. Liston, the veins being in an engorged condition. Upon the first incisions being made, the blood flooded out, to use the words of that celebrated operator, "as from a shower-bath;" the patient rolled in exhaustion and agony from the table, and the operation was completed upon the floor; the patient collapsed, and was with difficulty restored by the energetic exhibition of stimulants. In Mr. Aston Key's operation, performed upon the Chinese Hoo-Loo, the results were similar, but, from the feeble Asiatic temperament of the patient, more disastrous. The operation lasted an hour and three quarters, and the patient, who had shown some signs of syncope during its continuance, died immediately after its conclusion. It may be observed that in both these cases the genital organs were necessarily sacrificed in an effort to hurry the operation to a conclusion, in order to save the patient from impending death from hæmorrhage.

Results of this character, occurring in the hands of some of the first operators of the day, were sufficiently appalling; and it speedily became evident that, unless some means could be devised to diminish this excessive hæmorrhage, the removal of such tumors must, like the extirpation of bronchocele, be for the present abandoned. It was, therefore, with peculiar satisfaction that the profession learned, in the *Dublin Hospital Gazette* of February, 1845, that a method of operation had been devised by Dr. O'Ferrall, by means of which he had removed an enormous scrotal tumor (fully equal to those removed by Liston and Aston Key) without difficulty in eight minutes, and with the loss of only five ounces of blood; the genital organs being preserved, and the patient having made a good recovery, notwithstanding attacks of erysipelas and various other unfavorable circumstances. Such an announcement could not fail to be in the highest degree gratifying; and it became all the more so when it was found the importance of Dr. O'Ferrall's plan of operation was only equalled by its extreme simplicity. Observing the great change produced in turgid varicose veins of the leg by placing the patient upon his back and elevating the limb, and the immediate arrest of hæmorrhage from such veins which ensues upon the adoption of this position, it occurred to Dr. O'Ferrall that, if the enlarged scrotum were held up, a similar withdrawal of the vital fluid would take place, particularly as regards the enlarged and tortuous veins which were the principal sources of hæmorrhage. The result completely justified the accuracy of this expectation—the more so as the hæmorrhage in these cases had been always observed to be principally of a venous character; the arterial hæmorrhage, in Ashton Key's case, being estimated to be scarcely one-twentieth of the whole.

Since the publication of Dr. O'Ferrall's plan, a complete change has occurred in these operations, which have since been performed in rather considerable number, and with an ease and success more or less resembling that experienced in his case. I now recur to the plan, because in two instances of operation published during the present year (in one of which an Asiatic was the subject) it appears to me that the able and successful operators, although adopting the method, omitted, in their reports of the cases, to make due acknowledgment to the author; contrasting, in this respect, with Mr. South, who, in his splendid work on Surgery, gives due prominence to Dr. O'Ferrall's plan.

The application of this method is by no means limited to the removal of large scrotal tumors. On the contrary, it has been resorted to by Dr. O'Ferrall in cases of considerable innocent tumors of a vascular character; and in amputations he has obtained great advantages by loosely applying the tourniquet, elevating the limb, emptying it of venous blood by manipulation, and then tightening the tourniquet. The limb can thus be kept in a state of compara-

tive anæmia while the amputation is being accomplished; and a loss of blood can be prevented, which, by deteriorating the general quality of the vital fluid, might have laid the foundation of subsequent disease. In fact, the value of a position by which the entrance of arterial blood into a limb will be retarded, and the exit of venous blood facilitated, is almost as useful in the performance of an operation as in the treatment of inflammation.—*London Med. Times and Gazette.*

CONTINUED HISTORY OF A CASE OF "GOUGING."

By E. L. HOLMES, M.D., OF CHICAGO, ONE OF THE SURGEONS OF THE CHICAGO CHARITABLE EYE AND EAR INFIRMARY.

IN a former number of this Journal (December, 1859) may be found the history of a case of injury of the eyes which has scarcely a parallel in the annals of ophthalmic science. I have lately had an opportunity of examining the patient, and hope an account of his present condition will not be uninteresting to the readers of the Journal.

For the benefit of those who may have forgotten the previous history of the case, I may state that an Irishman, 37 years of age, was attacked by some one, who forced his thumbs with such violence into the patient's orbits as to rupture both globes. For six weeks the patient remained in the southern part of this State, totally blind, and received, as he stated, no other treatment than repeated doses of sulphate of magnesia, internally, and wet compresses locally. At the expiration of this time he was able to distinguish light, and gradually regained indistinct vision of large objects. Five months after the assault, the patient came under my care. With the right eye he could see light and the shadows of objects passed in front of the eye; with the left eye he could, with a little assistance from an attendant, conduct himself in any of the streets of Chicago. The cornea of each eye was perfectly normal in appearance. The upper and inner sixth of each iris was absent; it had apparently been torn away, as in an operation for iridectomy. The pupils were consequently elongated. Near the inner extremity of each pupil was a cicatrix, at the union of the sclerotica and cornea, in which were involved particles of pigment, probably from the iris. A rupture of the globes had, without doubt, occurred at this place, and through the opening had evidently been forced the lost portion of iris and crystalline lens of each eye, for in neither eye could a trace of the lens be found. Trembling of the iris, usually observed after the removal of the lens, was absent in both eyes, probably on account of tension of the radiating fibres of the iris, produced by their contraction during cicatrization.

The vitreous humor of each eye was shown by the ophthalmos-

scope to be so clouded with fine and black particles floating in its substance, that the vessels of the retina and the papilla of the optic nerve could [? not] be readily seen, especially in the right eye.

By the use of a simple supporting treatment the patient was so far improved in four months as to be able to walk without assistance and to read large signs across the street, although he could not, even with the aid of double convex lenses, distinguish minute objects. The vitreous humor of both eyes had become nearly transparent, although vision of the right eye had not improved.

A few weeks since, more than three years and a half after my former report, the patient again consulted me in reference to his vision. Five months previously the perception of light in the right eye began to fail, and in less than four months it was wholly extinct. The vision of the other eye has remained as before, with possibly a slight improvement. The only change noticeable by a simple inspection is a marked trembling of each iris, which, it will be remembered, was not present three years ago.

In the right eye neither papilla nor vessels can be discovered with the ophthalmoscope. Even the peculiar red disk, almost invariably observed through the pupil by the ophthalmoscope, cannot be seen.

By means of light concentrated by a powerful double convex lens obliquely upon the cornea, and thrown into the pupil, a dark-bluish mass can be seen lying behind the iris; this is undoubtedly the retina, which has been detached from the choroid.

The papilla of the other eye is of an oval form and of a greenish-blue color. It appears smaller than in a normal eye. The line of demarcation between the papilla and the retina is very distinct, except at its upper and outer portion, where a part of the optic nerve seems to be covered with lymph. Whether the oval form of the papilla is produced by an increase of convexity in the cornea in the direction corresponding to the long diameter of papilla, I am unable to say.

The vessels of the retina are finer than in a normal condition of the eye, and appear more like solid threads than like vessels. The absence of the lens, which has a large magnifying power, will account for the apparent decrease in the size of the papilla and vessels. The red appearance of the retina and choroid is somewhat darker than normal, and different portions of these membranes seem of a different color and texture.—*Chicago Medical Journal.*

A VETERAN MEDICAL JURIST.—Casper, the renowned Professor of Legal Medicine at Berlin, a few weeks since celebrated a remarkable day in his long and illustrious professional career, viz., the day on which he executed his thousandth medico-legal autopsy. He certainly was justified in placing on the title-page of his "Manual of Legal Medicine," the epigraph "*quod vidi scripsi.*"

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 27th.—*Correspondence between the Physical Signs and the Pulmonary Lesions in Phthisis.*—Dr. JACKSON remarked that when, in case of phthisis, the physical signs show that one upper lobe is extensively diseased, it may be taken for granted that the one upon the other side must be more or less so; and he had often examined this last with a view to ascertain, by test, how far the signs corresponded with the amount of disease, in cases where a *post-mortem* examination would probably soon be had. The result of these examinations had been in many instances not at all favorable to the signs as a means of diagnosis; and he was led to make these remarks from having recently had such a case under his care at the Hospital. A young man entered in an advanced stage of disease, and the upper left lobe seemed to be quite disorganized. On examining the right lung, he could only detect a moderate amount of rather coarse mucous râle, over the greater part of the front; elsewhere, on that side, percussion and auscultation gave only normal results. Yet the upper lobe of that lung was found, after death, to be extensively diseased, being filled with a tubercular deposit and some small cavities. This case showed the importance of not trusting to the physical signs alone, in the diagnosis of phthisis. If there had been no disease in the left lung, that in the right might have been overlooked. He mentioned a case in which a skilful auscultator had pronounced a patient with all the rational signs of phthisis free from pulmonary disease, because he could detect no physical signs; and the patient died shortly afterwards of consumption.

Dr. C. E. WARE thought that no degree of resonance was to be relied on as a standard in percussion. It was only by comparison of the two sides that a judgment could be formed.

Dr. SHATTUCK alluded to the case of a hospital patient with the symptoms of dyspepsia, who had no physical signs of pulmonary disease, but whose lungs were found, after death, to be filled with miliary tubercles, without softening; also to that of a man supposed to have rheumatism, whose lungs were found, on *post-mortem* examination, to be tubercular, although the fact had not been discovered during life.

Dr. BETHUNE observed that there were no certain signs by which acute tuberculosis could always be detected. He suggested that the spirometer might be of service in these cases.

AUG. 10th.—*Pneumonia of upper Lobe of left Lung, with some peculiar Features.*—Dr. ABBOT said that he was in attendance on a lady, aged 35, five weeks married to her second husband, who had been ill four weeks of that time. When called to her, she had been confined to the bed for two weeks with severe thoracic and abdominal symptoms. Percussion showed complete dulness throughout the left chest, front and back, absence of respiration in the lower left front, feeble but normal respiration in the lower left back, bronchophony and bronchial respiration in the upper half, before and behind. No râles could be heard anywhere, and there was no expectoration, nor had there been any from the first. There was considerable soreness about the middle and lower left front, which had been severe at the commencement of the attack.

Respiration of right lung normal, but exalted. The abdomen was very full, resonant on percussion, and quite tender universally, but much less so, the patient stated, than it had been. Dyspnœa was moderate: decubitus dorsal. The pulse was feeble, 120. Treatment, beef-tea, wine whey with discretion, pulv. Doveri gr. v. every second hour. The next day the patient was found much more comfortable, and had slept well. Dr. Abbot's attention was called to a greatly enlarged condition of the superficial veins of the neck. They were very much distended, apparently to their utmost, producing a very uncomfortable and painful sense of tension. This condition was most marked on the left side, but was very decided on the right. There was no headache, nor other cerebral symptom. Applications of cold water gave much relief. The treatment was continued for a week, the stimulant being suspended at times, and a simple expectorant given. Dover's powder secured good rest each night. At the end of this time resolution had commenced, as was indicated by softer and more normal respiration in the left front chest, down to the third rib, where bronchophony and bronchial respiration were heard as before, accompanied by a decided muco-crepitant râle, over the surface heretofore exclusively occupied by the bronchophony and bronchial respiration. Similar modification of voice and respiration was heard over a space of the width of three fingers, below the spine of the left scapula, but no râles. Respiration below as before. No expectoration. Resolution had continued, and the patient was steadily improving up to the time when the case was reported, the peritonitis having disappeared some days before. Profuse sweats, which came on in the course of treatment, yielded to oxide of zinc. The enlargement of the external jugular veins had nearly subsided. Some modification of voice at the base of the left chest in front was noticed, hardly amounting to ægophony.

Dr. Abbot wished to call particular attention to three features of this case, viz: the solidification of the upper lobe, with moderate pleuritic effusion at the base of the left lung, the entire absence of expectoration throughout the continuance of the disease, and the unusual distension of the veins of the neck, which was probably due to the obstructed circulation through the left lung.

Dr. Abbot said he was struck, in considering this case, with the extreme probability of the theory which explains bronchial respiration, by the conduction through the solidified lung of a sound produced by the passage of the inspired air *across the orifices of the bronchial tubes leading to it*, setting the air within them in vibration, as one might by blowing across the open end of a key. Of course no air could enter or pass out of a solidified lung, and the upper lobe in the present case was in just the position for a very striking exhibition of the sound in question, such as really existed.

[Since this case was reported, we are informed the case has gone on to recovery.—SECRETARY.]

Dr. C. E. WARE thought the absence of expectoration in pneumonia was not so rare as commonly supposed. He had seen several instances of it within a few years.

Dr. JACKSON thought that the physical signs in Dr. Abbot's case, especially when taken in connection with the fact that the patient had peritonitis at the same time, and with the absence of expectoration, threw some doubt upon the existence of pneumonia. Inflammation is apt

to occur in different serous membranes at the same time, and the disease may have been pleurisy, instead of pneumonia. Pleurisy generally accompanies pneumonia, and Dr. J. had always thought that the resonance of the voice and the bronchial respiration were in many cases more due to the effusion than to the pneumonia itself. The intensity of the above signs in Dr. A.'s case, he thought, would point to the pleura rather than the lung. Many years ago he had published, in *The American Journal of the Medical Sciences*, two cases to show that this same intense resonance and bronchial respiration might exist in simple hydrothorax from disease of the heart.

Dr. WARE remarked that although pleurisy was generally present in pneumonia, the amount of effusion was usually small, and not enough to materially modify the respiratory sounds; whereas the bronchial respiration of pleurisy was connected with a condensation of the lung produced by the pressure of a large amount of fluid.

Dr. ABBOT said that in his case the bronchophony was confined to the upper part of the lung; in the lower part there was no bronchophony nor bronchial respiration, but vesicular respiration, though faint. The effusion, if any, could not have been large.

Dr. WARE had seen lately, in consultation, a case of pneumonia, which showed the uncertainty of the prognosis in that disease. The patient was a gentleman, 60 years of age, with well-marked pneumonia of both lungs, who had previously been subject to a cough, and was supposed to have chronic pulmonary disease. He was, however, strong, vigorous and active. A favorable opinion was given, based upon the limited extent of the disease and the slight constitutional disturbance for a double pneumonia. On the third day afterwards there was some increase in the symptoms, and the patient suddenly sank, and died in a few hours. Dr. W. had at the same time, in the Hospital, a case of double pneumonia, the lungs being extensively affected, but the patient recovered. He had also previously reported to the Society a case of pneumonia of very limited extent, but complicated with dilated bronchus, which terminated fatally. In this case, however, there was disease of the kidneys.

AUG. 10th.—*Five Difficult Labors followed by a Short and Natural One.*—Dr. ABBOT gave the obstetric history of one of his patients as follows. Her first labor was protracted and difficult, owing to the head becoming impacted at the brim of the pelvis. Death of the child resulting, craniotomy was practised, and the mother recovered, with some lingering neuralgic pain in the right leg.

In her second pregnancy, the patient was persuaded to allow premature labor to be induced at the seventh month. The child was born alive, and is still living; the mother did well.

In the third pregnancy, the process of induction of premature labor at the seventh month was repeated, but was fatal to the child.

In her fourth pregnancy, the practitioner who had attended her in all her confinements (homœopathic) was desirous of bringing on premature labor as before, but the patient being very averse to it, consulted Dr. Abbot, who made an examination of the pelvis. The antero-posterior diameter of the brim was somewhat under the normal dimensions, but not enough, in his judgment, to make the birth of a living child at full time impossible. The patient assured him that her mother and sister both had very difficult labors with the first child,

but their subsequent labors were natural. The patient being very desirous of going to the full term, determined to take her chance. She was attended by the same practitioner, who delivered by the feet, breaking one of the thigh-bones of the child in the process. The child recovered and did well.

In her fifth pregnancy, the patient went to the full term and was attended by Dr. Abbot. The labor was difficult, the head being arrested at the brim of the pelvis. The expulsive efforts of the uterus were of extraordinary power, and it becoming evident that the child could not be born without assistance, the forceps were applied with some difficulty, and after the most forcible traction for half an hour a living child was brought into the world. The forceps were applied obliquely, one blade being over the right side of the forehead and cheek, the other over the opposed side of the occiput. The force required to extract the child pressed the right blade of the forceps completely through the scalp for the extent of an inch just where the hair joins the forehead, running up towards the crown, and there was also paralysis of the left side of the face. The wound healed kindly, and the paralysis disappeared in about ten days. The child, a girl, weighed nine pounds and a half, and is now living and thriving.

August 10th, thirteen months and twelve days after the birth of the fifth child, Dr. Abbot was again called upon to attend the patient in confinement. On arriving at the house, he found her in strong labor, with violent expulsive pains, which she had had for two hours. On examination, the head was found at the external organs, and the child was born, living, in fifteen minutes after his arrival. The child, a girl, weighed nine pounds and three quarters, or a quarter of a pound more than the previous child. Thus, at the sixth delivery, the patient had for the first time a natural, uncomplicated and unassisted labor. In the last two labors the patient inhaled sulphuric ether with the best results. Dr. Abbot considered the bearing of this history as important, in cases in which a physician may be called on for a prognosis where a previous labor or labors had been difficult or dangerous.

AUG. 24th.—*Wound of the Neck ; Ligature of the Common Carotid ; Death ; Autopsy.*—Dr. HODGES reported the following case.

A young man, aged 25, was stabbed, with a sharp, and apparently broad-bladed knife, in three places, by a person standing in front of him. One blow resulted in a division of the lower lip, through its whole thickness, from the free border to the chin. A second inflicted a cut, about an inch in length, just below the ear, along the anterior border of the sterno-mastoid muscle, dividing a portion of the parotid gland and penetrating half way through the thickness of the muscle. A third stab, in the middle of the side of the neck, about two inches long, passed through the belly of the sterno-mastoid muscle, downwards and backwards, till the knife was arrested in the spine, where it made a deep cut in the anterior surface of the body of the first dorsal vertebra.

The patient arrived at the Hospital at about 8½ o'clock in the evening, an hour, perhaps, after the receipt of the wound, the whole front of his shirt and trowsers being saturated with blood, his aspect blanched, and his pulse considerably diminished in force. Upon etherizing him and dilating the wound which was last described, the others being comparatively unimportant, a constant hæmorrhage, arterial and ve-

nous, was found to be taking place. It was with great difficulty controlled by compression, and in fact came from so deep a portion of the wound that the moment pressure was suspended, with a view to ascertain the locality of the bleeding point, the hæmorrhage, rapidly welling up, filled the wound, prevented its detection, and still more its seizure with the forceps. It was plainly to be seen that a great part of the blood came from the internal jugular vein, in which there were no less than three cuts. A ligature passed above and below these wounds in the vein did not much diminish the bleeding, and as the patient's condition was a failing one, it was decided to tie the common carotid, the general direction of the wound and amount of arterial blood leading to the supposition that the trunk of that vessel was wounded, a supposition, however, which the autopsy proved to have been incorrect. The artery was tied below the omo-hyoid muscle, an inch above the clavicle. Another ligature, *en masse*, about the vein, finally completed the measures found necessary to arrest the bleeding.

The patient rallied well, but on the second day complained of sore throat and dysphagia; there was some difficulty in breathing, and a very considerable swelling of the neck; this increased until he died, about seventy-eight hours after receiving his wounds. At the autopsy, a phlegmonous inflammation of the cellular tissue between the œsophagus and the vertebræ, with a very large deposit of lymph and much pus, starting from the wound in the first dorsal vertebra, extended upwards as far as the dissection could be carried, and superficially in the muscles and fasciæ of the neck. The internal jugular vein was obliterated and lost, for about an inch, in the suppurating and sloughy tissues around the ligature. The carotid artery was found to be uninjured. It is probable, therefore, that the arterial hæmorrhage came from the descending thyroid and sterno-mastoid branches of the external carotid, though the condition of the parts did not permit a verification of this at the dissection. A firm fibrinous clot plugged the artery below the ligature; the distal portion of the vessel contained several firm coagula, and its walls were thickened and contracted by plastic effusion. A very thorough autopsy was made by Dr. Ellis, but no points of special interest other than those mentioned were noticed.

AUG. 24th.—*Dropsy of the Antrum from Mal-position of a Tooth.*—Dr. HODGES exhibited a permanent incisor tooth, removed from the posterior wall of the cavity of the antrum. A little boy, 10 years old, presented himself among the out-patients of the Hospital, with a deformity of the left side of the face, which, on examination, proved to be due to “dropsy of the antrum.” The anterior surface of the superior maxillary bone was absorbed and distended, presenting the parchment-like crackling and feel characteristic of this disease. The operation practised for its relief consisted in the removal of an elliptical-shaped piece from the wall of the cavity, just above the alveolar border of the bone, close to the reflection of the mucous membrane from the gum to the lip. A large quantity of viscous, transparent fluid was discharged. On inspecting the cavity of the antrum, the tooth shown was seen lying flatwise on its posterior wall, from whence, with some difficulty, owing to its offering so little surface to be seized, and its firm implantation, it was extracted. The boy made a rapid recovery, and his face resumed its natural contour. The specimen

was thought worth exhibiting, as this mal-position of a tooth is recognized as in rare instances causing an encysted condition of the antrum; two cases of the disease, one by A. Dubois and the other by Blasius, being recorded as having originated from teeth developed in a similar abnormal situation.

AUG. 24th.—*Excision of the Metacarpo-phalangeal Articulation of the Thumb.*—Dr. HODGES reported the case.

A pistol bursting in the hand of a boy on the morning of the 4th of July, lacerated his fingers in various directions. The fore-finger required amputation; a long, linear wound encircling the base of the thumb, laid open its metacarpo-phalangeal articulation, producing a compound dislocation and a transverse fracture of the metacarpal bone, close to the articulating surface. Believing that the chances of a useful thumb would be as great if the articulation was excised as it would be were simple reduction practised, and that the inflammation resulting from both the injury and the operation would certainly be less, complete excision was practised. The wound healed by first intention, and the patient rapidly recovered without any deep-seated palmar suppuration, such as might have been expected, with a thumb hardly differing from its fellow in appearance, and which, though somewhat impaired in mobility, could still be opposed to the fore-finger in the most satisfactory manner. In view of the bad results ordinarily attending compound dislocations of the fingers, this case, so far as it goes, seems to justify the assertion of many authorities that in similar instances excision is a safer course to pursue than simple reduction.

Army Medical Intelligence.

To the Surgeon-General.

{ CAMP OF 16TH MASS. VOLS., NEAR BEVERLY
FORD, VA., Aug. 22d, 1863.

SIR,—It has long been my intention to write you, making my periodical report of the condition of the veteran 16th, and the matters connected with the department of your humble servant; but in the times of inaction there is so little to communicate, and during the fierce periods of engagements, like our late one at Gettysburg, such a full occupation of time and overtaking of strength, that my pen has been suffered to remain undisturbed. I have just joined my regiment in the front, having been absent since July 2d, laboring in the field hospital of the 2d Div., 3d Army Corps, where I was detailed as surgeon in charge. In the discharge of my duties I saw many things of interest to the surgeon, and had opportunities of watching the after results of operations seldom presented to those of us accustomed to follow the army. Perhaps my evidence on some points will be interesting to you, and not entirely useless, removed as you are from the battle-field, and therefore obliged to depend upon the testimony of your agents for an intimate knowledge of the usual practices followed and results obtained.

The system of detail of surgeons for the field hospital, as ordered by the Medical Director of the Army of the Potomac, to be made before a battle, has been in operation since the first battle of Fredericksburg, and with excellent results. At the risk of repeating what you

are probably familiar with, I will briefly state, that three operating surgeons are detailed from the Division, whose duties are to perform all of the operations, and to consult together over the serious cases of injury ; three surgeons or assistant surgeons without regard to rank, but competency merely, to assist each of these operating surgeons ; one assistant surgeon to keep the records of the hospital and to superintend the burial of the dead ; one to provide straw and shelter ; and a surgeon in charge to superintend the workings of the whole machinery. A small portion of the surgical staff accompanies the regiments to the field. All medical officers not detailed repair to the field hospital to act as dressers. Previous to an engagement, the hospital is established at a comparatively safe distance from the field of battle, the hospital wagons repair to the spot, the amputating table contained in each brigade wagon is put in readiness, the beef-stock and other articles of nutrition are made available for the needs of the wounded, and each medical officer is at the post assigned him. Thus are avoided delays and the conflict of duties on the part of different surgeons, formerly so common, and is gained a personal responsibility that each individual now has of attending to his allotted duties.

A mistake made at Gettysburg, and one of usual occurrence, is that of locating the hospital too near the battle-field, making it necessary to remove to a greater distance during the engagement, causing thereby a temporary confusion and loss of time. The 3d Corps Hospital, at the battle of Gettysburg, was at first located under the brow of Round-top Mountain. Before we had got fairly to work, shells burst in our midst and Minié balls whizzed past, striking with terror the mutilated and helpless soldiers who were fast arriving, and whose first wish was a place of safety, besides disturbing the nervous equilibrium so necessary for the best services of the surgeons. The English rule, to have the hospital three miles from the battle-field, seems the correct one. To show the uselessness of keeping surgeons on the battle-field, I will mention an incident related to me by a surgeon, which occurred at Gettysburg. He was dressing on the field the wounded finger of a soldier, when a piece of shell struck the man's leg, rendering amputation necessary. The dangerous hæmorrhages after bayonet or gun-shot wounds, talked of in books, and rendering immediate assistance indispensable, are never seen in this war. I have talked with a very large number of surgeons, and their experience coincides with mine, that men do not get bayonet wounds (I know not on which side the retreat movement in view of the bristling steel commences), and that the immediate hæmorrhage from a Minié ball is not great.

The 2d of July was a black day for the 3d Corps. Thick and fast ambulances were conveying the wounded, and maimed men were finding their way with feeble steps to the hospital. The battle of the succeeding day, and the arrivals from farm- and out-houses continuing for many days, swelled the number to about fifteen hundred. During the whole of the nights of the 2d and 3d and the intervening day, the surgeons labored almost without cessation. The importance of guarding against delay in capital operations was fully felt. The dangers of a too conservative surgery had likewise been impressed upon us by results witnessed after other battles, and particularly that of Chancellerville. All compound fractures of the lower extremity were amputated at once, with the exception of one case of resection of about

three inches of the fibula, as well as a few cases of comminuted and compound comminuted fractures of the upper third of the thigh, most of which presented themselves from the neighboring farm-houses several days after the engagement. Under the circumstances, the preference in the last-mentioned cases was given to the slight chances of consolidation afforded by the apposition of the fragments, rather than to the sure prospect of death after a late amputation. Among the operations performed were resections of the superior and inferior maxillary bones, of the head of the humerus and of portions of the bones of the fore-arm. The cases of resection all left the hospital at an early day. They were doing well at the time of their departure, and all report, in letters to their comrades, favorable progress.

The following table will exhibit the result of the capital operations :

	No. of Operations.	No. of Deaths.	Percent. of Deaths.
Amputation of thigh - - - - -	26	19	.73
“ “ leg - - - - -	21	4	.19
“ at shoulder-joint - - - - -	2	1	.50
“ of arm - - - - -	9		.00
“ fore-arm - - - - -	4		.00

A large proportion of the thigh amputations were secondary. There were sixteen cases of secondary hæmorrhage, eleven of which were fatal. In one instance the axillary was tied; in many, some of the branches of the larger arteries on the face of the stump. Pancoast's styptic was found useful in some of the minor cases of hæmorrhage, and was preferred to the persulphate of iron, inasmuch as it leaves the surface of the stump in a healthy condition, and is not open to a grave objection to the iron, namely, the thick incrustation produced by its application. The *rationale* of its operation I don't attempt to understand, but I will give the recipe as received by me from Dr. Brinton, Surgeon of Volunteers and Lecturer on Surgery in the Military College, Washington. *R.* Carbonate of potash, 3j.; castile soap, 3ij.; alcohol, ʒiv. *M.*

In one case of hæmorrhage, occurring fourteen days after the removal of the arm at the shoulder joint, and which was probably from one of the acromial branches, this styptic, with pressure on the subclavian not long continued, was perfectly successful, although the patient had lost about six ounces of blood before the arrival of the surgeon. There was no recurrence of the hæmorrhage, and the patient is now quite strong.

When the rate of mortality is considered, it must be remembered that most of the men had been thoroughly exhausted by hard marching for three weeks under a hot sun, with an irregular supply of food, before being called into one of the severest battles on record. They had reached almost the last point of physical endurance, ere the suffering from their wounds, the shock of system and loss of blood were still further to tax their frames. In many cases, a feather's weight seemed sufficient to shift the balance of the scales. The loss of a few drops of blood by secondary hæmorrhage left several previously encouraging amputations in a rapidly and hopelessly sinking condition.

I will mention, in this connection, that coal oil was used with good results in the dressing of unhealthy granulating stumps, and for the destruction of larvæ which during the first few days after the battle

made their appearance on some of the men who had been lying in the mud, exposed to the continuous rains prevalent, and out of the reach of proper attention. Its effect on the granulations seems to be that of a stimulant.

There were four cases of tetanus, all of which died on the second day. The form was trismus, with slight opisthotonos in three cases. In all of these the men had been much exposed during three consecutive rainy days, commencing on the third day from the reception of their wounds. They lay near each other on a muddy spot of land, and were without shelter. The position of the wounds varied. In one case it was a gunshot wound through the metatarsus; in one, a flesh wound of the upper part of the calf of the leg; and, in two, wounds of the gluteal muscles. The treatment employed was that of chloroform and opiates.

The following is a statement of the members of Mass. regiments in the 2d Division 3d Corps, treated in the field hospital:—

1st Massachusetts,	Number treated,	37	Deaths,	5
11th	"	36	"	4
16th	"	28	"	1

This by no means represents the whole number of the wounded in the abovementioned regiments, as very many, slightly injured, after having their wounds dressed, would leave before their names were taken by the Recorder.

On the fourth day from the first reception of the wounded from the 3d Corps, the army advanced, and our surgical staff was diminished to twelve in number, the remaining surgeons being ordered to accompany their regiments in expectation of another battle. As the patients were sent away to general hospitals, which was done as rapidly as the means of transportation and their own condition would allow, medical officers were returned to their regiments. Surgeons Prentice of the 1st Excelsior regiment, Whiston of the 1st Mass., and Douglass of the 11th Mass., rendered valuable services throughout the whole term of the existence of the hospital. The Sanitary Commission arrived in Gettysburg with immense loads of stores almost immediately after the battle, and made the purveying department, as there conducted, when compared with their enterprise and tremendous enginery, appear insignificant.

An account of this encampment would be incomplete did I omit to mention the services of Miss Helen Gilson, of Chelsea, well known in the hospitals of the 2d Division of the 3d Corps for the last year and a half, who early arrived in the hospital, and by her untiring energy, judicious attentions, cheerful conversation and singing to the men, rendered herself, as ever before when she has been among the wounded, invaluable. The sick and wounded of the 2d Division, and particularly of Mass. regiments, have reason to bless her.

In conclusion, I am happy to state that the health of the men in the old 16th is excellent. This morning's report gives the strength of regiment, 299; sick in hospital, 6; sick in quarters, 5; being not quite four per cent. of sickness. Dr. King, 1st Ass't Surgeon, attended competently and faithfully to their wants in my absence, as he continues to do, my seniority as surgeon in the brigade causing my duties to lie mainly outside of the regiment.

Your obedient servant,

C. C. JEWETT,
Surg. 16th Mass.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, SEPTEMBER 3, 1863.

REGISTRATION OF MASSACHUSETTS.—It is now just twenty years since the first attempt was made to collect statistics in this State in relation to the annual number of births, deaths and marriages. Their compilation at that time was fortunately entrusted to one of our profession who was entirely fitted for the task, both novel and difficult, and who, in spite of the embarrassments necessarily connected with the workings of a new and unpopular statute, succeeded in giving to the crude materials placed in his hands a law and method of arrangement, which have been observed with few variations up to the present time by his successors in these labors, and which have been greatly instrumental in finally bringing the registration reports of this State to an almost perfect condition. It is with much pleasure, therefore, that we would call the attention of our readers to the Report for 1861, just published by the Secretary of the Commonwealth, under the editorship of Dr. A. A. Gould, who, after a lapse of twenty years, has again undertaken its preparation. The comments upon the returns, which he has made under the head of "Summary Observations," and illustrated with numerous elaborate tables, which indicate an amount of labor only to be appreciated by those who have undertaken a similar task, will be found to possess great value in a professional point of view. The publication of the preliminary report of the last census of the United States has afforded the opportunity of comparing the State returns with those of all other sections of our land, and many curious facts illustrative of the effects of variety of climate and social condition upon disease have been elucidated. We drew attention a short time since, in our notice of the Report of the City Registrar, to the marked diminution in the number of births and marriages occasioned by the absence of so many of our young men in the service of our country. The same results are derived from the returns of the whole State, for during the year 1861 31,445 births took place, or 606 less than the previous year, while the number of marriages is less by 1432.

"Compared with the annual average of the five preceding years (1855-60), there is a *decrease* for 1861 of seven hundred and seven (707) births; and of seven hundred and ten (710) persons married—three hundred and fifty-five (355) marriages—and an *increase* of five hundred and seventy-eight (578) deaths.

"The *natural* increase of the population of the State, as indicated by the excess of births over the deaths, was twelve thousand nine hundred and eighty-three (12,983), which exceeds the increase of the preceding year by sixteen hundred and twenty-three (1,623.)

"There has been, according to the registration of 1861, in round numbers, a *daily average* of ninety-seven births; thirty marriages (sixty persons married); and sixty-six deaths—excess of births over deaths, thirty-one *daily*.

"The *rates* of births, marriages and deaths in Massachusetts, for the year 1861—that is, the registered number for every 100 persons living, were:—births, 2·858; persons married, 1·786; deaths, 1·961—excess of birth-rate over death-rate, ·897.

"There was one child born alive to every thirty-five persons living: one person married to every fifty-six persons living; and one death to every fifty-one persons, taking the census of 1860 as a basis.

"The marriages have been fewer in every county, excepting Hampden, than in 1860. The births have increased in the counties of Barnstable, Berkshire, Bristol, Dukes, Hampden and Plymouth, and have diminished in all the others. The deaths have increased in every county excepting Suffolk, where they stand 4,258 against 4,610 in 1860; a diminution of 232 males and 118 females. The average age of those who died was 27·87 in 1860, and 27·53 in 1861."

In connection with the preponderance of male births over female, some very interesting statements of Mr. Whitehead are given, from which it appears that in Central and Northern Europe the number of males born exceed the females as 106 to 100, that in France for fifty years there has been a range of 107·38 to 106·05 males against 100 females, in Austria for a period of three years of 106·45 to 100, in Russia for thirteen years of 109·55 to 100, and in England for ten years 104·09 male births to 100 female. The difference is less observable in large cities than in the country, but he concludes that neither health, occupation, poverty, climate or any other condition of the male parent exercises any influence upon this law. The great excess of males over the females among the stillborn is noticed, and the proportion observed corresponds almost exactly with the ratio in Europe, viz., 136 to 100. Dr. Gould suggests that there may be some foundation in fact to the popular notion that the size of the head is greater and its ossification more advanced in the male than in the female, and hence the perils of the female are greater.

"The common impression that a larger proportion of males is derived from illegitimate than from normal births, is shown to be erroneous. It may so occur occasionally, but in any extended series of years, the preponderance of the male birth-rate is constantly on the side of legitimacy. During fifteen years, in England, 104·26 males were born out of wedlock, and 104·70 to 100 females in wedlock. In France, 101·74 were born in wedlock to 102·61 out. In Paris, the mean result for sixty-six years, was only 96·58 illegitimate to 100 legitimate male births. To show how this rate varies in the different populations, he states the following results:—

"In 43 manufacturing towns, 105·07 legitimate, 102·72 illegitimate.

In 53 cathedral towns, 103·15 " 103·50 "

In 60 agricultural towns, 105·00 " 105·91 "

In London, 103·96 " 102·92 "

In all England, 104·70 " 103·40 "

* * * * *

"Some efforts have been made to estimate the losses by abortion, that is, the failures in child-bearing during the four early months. By calculations derived from 6,000 mothers, 17 failures to 100 births after that period were *ascertained*; the stage previous to the time at which ascertainment is possible being still more tender, the rate of loss would be proportionally larger; so that Mr. Whitehead concludes, that of the whole number of actual conceptions, not more than one half are born alive at the full period."

From the table exhibiting the parentage of the children born in the various counties, there appears to be a continued increase of foreign over native births throughout the State.

"In 1853, the excess of births of American parentage, over those of foreign parentage, was 2,793; whereas, in 1861 the excess of births of foreign, over those of American parentage, was 1,512, a difference of 4,305. In five counties the strictly foreign, where both parents were foreigners, exceed the American births, viz., Hampden, Middlesex, Norfolk, Suffolk and Worcester. The aggregates in these counties are, American, 8,415; Foreign, 11,600; mixed, 1,658; giving a preponderance of 3,185 births of foreign parentage."

The total number of deaths registered in the State during 1861 was

24,085, and of stillborn children 1,017. We cannot forbear, in this connection, placing upon our pages the following tables from the United States census, and the remarks that accompany them in the valuable report we are considering, in order that the important facts thus gathered may be distributed as widely as possible among members of our profession :—

Deaths in the United States for the Year ending June 1, 1860.

States and Territories.	Population.	Deaths, 1860.	Population to one Death.	Deaths pr ct. 1860.	Deaths pr ct. 1850.
Alabama - - -	964,201	12,759	74	1.34	1.20
Arkansas - - -	435,450	8,855	48	2.06	1.46
California - - -	379,994	3,704	101	0.99	1.00
Connecticut - - -	460,147	6,138	74	1.35	1.59
Delaware - - -	112,216	1,246	89	1.13	1.34
Florida - - -	140,425	1,764	78	1.28	1.08
Georgia - - -	1,057,286	12,816	81	1.23	1.11
Illinois - - -	1,711,951	19,299	87	1.14	1.38
Indiana - - -	1,350,428	15,325	87	1.15	1.32
Iowa - - -	674,948	7,259	92	1.09	1.08
Kansas - - -	107,206	1,443	73	1.37	-
Kentucky - - -	1,155,684	16,466	69	1.45	1.56
Louisiana - - -	708,002	12,324	57	1.76	2.35
Maine - - -	628,279	7,614	81	1.23	1.32
Maryland - - -	687,049	7,370	92	1.09	1.68
Massachusetts - - -	1,231,066	21,303	57	1.76	1.98
Michigan - - -	749,113	7,390	100	1.00	1.16
Minnesota - - -	173,855	1,108	153	0.65	0.50
Mississippi - - -	791,305	12,213	64	1.57	1.46
Missouri - - -	1,182,012	17,652	66	1.52	1.83
New Hampshire - - -	326,073	4,469	72	1.39	1.35
New Jersey - - -	672,035	7,525	88	1.14	1.34
New York - - -	3,880,735	46,881	82	1.22	1.49
North Carolina - - -	992,622	11,602	84	1.19	1.21
Ohio - - -	2,339,502	24,724	93	1.07	1.48
Oregon - - -	52,465	237	218	0.46	0.36
Pennsylvania - - -	2,906,115	30,214	95	1.06	1.26
Rhode Island - - -	174,620	2,479	69	1.44	1.55
South Carolina - - -	703,708	9,745	71	1.41	1.22
Tennessee - - -	1,109,801	15,153	72	1.39	1.20
Texas - - -	604,215	9,377	63	1.58	1.48
Vermont - - -	315,098	3,355	92	1.08	1.02
Virginia - - -	1,596,318	22,472	70	1.43	1.36
Wisconsin - - -	775,881	7,141	107	0.93	0.97
Colorado - - -	34,277	-	-	-	-
Nebraska - - -	28,841	381	75	1.34	-
Dakota - - -	4,837	-	-	-	-
New Mexico - - -	93,516	1,305	71	1.42	1.91
Nevada - - -	6,857	-	-	-	-
Utah - - -	40,273	374	106	0.94	2.13
Washington - - -	4,594	50	228	0.44	-
District of Columbia	75,080	1,285	58	1.74	1.66
Totals, - - -	31,443,322	392,821	79	1.27	1.41

“As the above figures are but for a single year, they cannot represent very accurately the result which would be derived from an average of a long series of years. Still there is evidently a wide range in the death-rate in different States and continental regions, represented at the one extreme by Arkansas, where one person dies in every 48 inhabitants, and at the other by Oregon and Washington Territory, which are put down respectively at one death in 237, and one in 228 inhabitants; and the average for the whole country at one death in 79, 1.27 per cent. of the whole population. The relative low death-rate in the newly-settled territories is partly accounted for by the fact that the inhabitants are mostly emigrants, in the prime of life, with a very small proportion of women, children and aged persons. Another cause of disparity is doubtless on account of the scattered and to some

extent friendless condition of the people, so that many die unknown, and more still uncared for, and their fate is never reported.

“Still there is a marked difference in the several regions where the disparity cannot be accounted for by any supposed deficiency in the returns. The essential agreement on this point in the two enumerations of 1850 and 1860, places the matter beyond a doubt. We give the following table, from the Census Abstract, as highly instructive and important, showing how much the death-rate is modified by the features of extensive natural regions of territory. The reputed salubrity and insalubrity of the interior continental regions (those not exposed to the influences of any sea), the North Western States on the one hand, and the hot, low, alluvial regions of the lower Mississippi Valley on the other, are shown to be based on ascertained facts. Every person, in selecting a place for permanent residence, may well be influenced by these considerations:—

NATURAL DIVISIONS.	Annual Deaths, 1860.	Per ct. of Population.	Per cent. in 1860.
I. Lowlands of the Atlantic Coast, from Delaware to Florida	15,292	1.34	1.45
II. The lower Mississippi Valley, from Cape Girardeau to the Gulf	30,154	1.81	2.38
III. The Alleghany Region, from Pennsylvania to Northern Alabama	26,346	1.08	0.96
IV. The Intermediate Region, to the lowlands of the Atlantic and Mississippi	79,615	1.32	1.19
V. The Pacific Coast	3,991	0.95	0.92
VI. The North-Eastern States	15,438	1.24	1.25
VII. The North-Western States	15,508	0.98	1.01
The whole United States	.	1.27	1.41

“The same diversity is seen when we compare the smaller, but almost equally contrasted natural divisions of our own State. These divisions have been well designated in the Report for 1857 (p. 194). By the following table, being a continuation of that in the Report of 1857 (p. 44) for nine years, it will be seen that the elevated regions show the least number of deaths in a hundred persons; the middle upland regions next; then the north-eastern, the interior valley, and the southern seaboard regions, and finally the metropolitan. Indeed, this is but a reiteration of the well-known fact established in older countries, that the rural districts have the highest vitality, the larger commercial and manufacturing cities the next highest, and the crowded metropolis least.—(See Report for 1859, pp. 49–52.”

There are several other interesting facts connected with the ages and sex of the persons deceased, which we would gladly refer to, did our space permit. In the division entitled causes of death, Dr. Gould has considered at length the prevalence of most of the more important diseases within the State, and the circumstances which affect their existence. The mortality from some of the most frequent of these was as follows:—Diphtheria, 643; dysentery, 532; typhus fever, 989; measles, 209; Scarlatina, 1,137; erysipelas, 194; croup, 461; cholera infantum, 1,266; teething, 321; consumption, 4,522; pneumonia, 1,285. The remarks upon the prevalence of consumption in different localities of the State and in the various sections of our immense country are of very great interest, but as we shall soon present to our readers the views of Dr. Gould in full upon this subject, we shall make no further mention of them here. Under the head of violent deaths in the United States, the following extract from the report will be found of particular interest at the present time.

“In looking over the deaths from violence in the United States Census, some curious facts present themselves, and may not improperly be noticed here. The whole num-

ber of deaths was 20,115, of which 14,155 were males, and 5,960 were females, or 2,392 males to 1,000 females.

"In regard to those deaths which may be fairly supposed to have resulted from carelessness, we find a singular preponderance against the southern section of the country. For instance, let us take *burns and scalds*. In the six States, Alabama, Louisiana, Mississippi, Georgia, S. Carolina and N. Carolina, with a population of 5,217,124, there were 1,300 deaths from this cause—one in every 4,013 of the population. In the six large States, Massachusetts, New York, Pennsylvania, Ohio, Illinois and Indiana, with a population of 13,419,806, there were only 1,218 deaths—one in 10,753 of the population. Take again *suffocation*. If we compare the fifteen slave States, having a population of about twelve and a half millions, with the twenty free States and five Territories, with a population of nearly twenty millions, we have dead from suffocation in the former 1,934, and only 130 in the latter. We can conceive of no way of accounting for this wide difference except by the varied circumstances in the state of domestic life in the slave and free population. Of *homicides*, it will be seen there were 240 in the slave and 166 in the free States. Of *murders*, 275 in the former against 141 in the latter States. Prepared as we might possibly be for the above figures, we shall probably be in no small degree surprised to find the balance so heavy against these same sunny climes, when compared with the northernmost States, by deaths from freezing. In South Carolina were 2; Georgia, 7; Alabama, 2; Mississippi, 10; Louisiana, 3; Arkansas, 4; Texas, 10—total, 38. In Maine, there were 3; Vermont, 1; New Hampshire, 1; Massachusetts, 1; Connecticut, 0; Iowa, 6; Minnesota, 2—total, 14. This must have been owing to the very inadequate provision made against the winter's cold in some of the interior mountainous districts of the Southern States."

In contrast with this condition of the poor population at the South, we quote in this connection what is said with regard to similar deaths within our own State limits.

"Under the heads privation, frozen and exposure, eighteen cases are stated. Nothing could afford more striking proof of the general comfort of the people than this statement. At a time our revolted people, in company with foreign nations, are looking for destitution and ruin at the North, and while thousands of families have been deprived of their natural guardians and coadjutors, only this small number, out of a million and a quarter of people, have succumbed to any kind of want or exposure."

The tables which make up the remainder of the volume are of the usual character, and have been prepared with great fidelity and industry. We trust that the report may be widely distributed.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 29th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	68	66	134
Ave. mortality of corresponding weeks for ten years, 1853—1863,	55.0	53.5	108.5
Average corrected to increased population	00	00	119.84
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
21	3	2	2	0	6	1	35

DIED,—At Dummerston, Vt., Sewall Walker, M.D., 67.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 29th, 134. Males, 68—Females, 66.—Accident, 3—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 3—cholera infantum, 35—cholera morbus, 3—consumption, 21—convulsions, 1—croup, 3—debility, 1—diarrhoea, 9—dropsy, 3—dropsy of the brain, 4—drowned, 2—dysentery, 6—scarlet fever, 2—typhoid fever, 1—typhus fever, 1—disease of the heart, 2—homicide, 1—infantile disease, 1—inflammation of the lungs, 2—marasmus, 2—old age, 1—paralysis, 2—pleurisy, 1—premature birth, 4—sore throat, 1—ulceration of the stomach, 1—suicide, 1—syphilis, 1—teething, 1—unknown, 7—whooping cough, 2.

Under 5 years of age, 76—between 5 and 20 years, 10—between 20 and 40 years, 24—between 40 and 60 years, 14—above 60 years, 10. Born in the United States, 104—Ireland, 24—other places, 6.

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No. 6.

CLIMATOLOGY OF CONSUMPTION.

[Read before the Boston Society for Medical Improvement, August 24, 1863, and communicated for the Boston Medical and Surgical Journal.]

By AUGUSTUS A. GOULD, M.D., BOSTON.

THE very elaborate inquiry of Dr. Bowditch to ascertain the circumstances which lead to the development of consumption in Massachusetts, resulting in the conclusion that its prevalence is intimately connected with, and apparently dependent on, the humidity of the soil, and that *soil moisture* is the only known characteristic connected with the consumption-breeding districts, has invested the etiology of this disease with a new interest. It may be questioned whether this relation as cause and effect has yet been so far proved as to be entitled to the appellation of a *law*, but it is certainly one well-established step towards it.

In a recent examination of the Registration Returns of Deaths, &c., in Massachusetts, I very naturally was led to observe what light these Returns would throw upon the question, and whether any new facts might be elicited. To enlarge the field of inquiry as much as possible, I compared the returns of this State with those of the United States Census for 1860. This Census has afforded an opportunity of tracing this and other diseases over a wider extent of territory and greater range of climate and variety of soil than has ever been enjoyed before, in any age or country. Reports of isolated and widely remote cities and military stations have been given already, but never has an inquiry throughout the whole land, at the same time and under the same auspices, been made.

Various opinions have been entertained as to the comparative prevalence of consumption North and South. Northerners are accustomed to say, and perhaps believe, that it is quite as great at the South as at the North; and an examination of the mortuary records of some of the larger Southern cities would well nigh justify their impression. The Southerner, on the other hand, declares that there would be no consumption at all at the South, except for the Northerners who come South to die. In order to arrive at something

positive on this point, I prepared a table showing the whole number of deaths ascribed to consumption in each of the States; then, the number of persons living to one who died of consumption; and, finally, the percentage of deaths from consumption to deaths from all other specified diseases, excluding deaths from violence. The States are arranged in the order of greatest mortality from consumption, as shown by this latter column.

STATES.	CONSUMPTION.			FEVER.			Sum of Percentages.
	No. of Deaths.	Population to one Death.	Percentage to all Deaths.	No. of Deaths.	Population to one Death.	Percentage to all Deaths.	
Maine - - -	2,169	290	29.888	616	1,019	8.500	38.388
New Hampshire - -	1,163	280	26.971	340	959	7.885	34.856
Rhode Island - - -	567	308	24.220	81	2,155	3.460	27.680
Vermont - - -	779	404	24.043	253	1,245	7.809	31.852
Massachusetts - - -	4,845	254	23.758	965	1,276	4.732	28.490
Connecticut - - -	1,269	363	21.611	341	1,349	5.807	26.418
District of Columbia	255	294	20.565	60	1,251	4.838	25.403
New Jersey - - -	1,350	498	18.794	314	2,140	4.371	23.165
New York - - -	8,207	473	18.265	1,663	2,333	3.701	21.966
Pennsylvania - - -	5,012	579	17.375	1,930	1,506	6.681	24.056
Michigan - - -	1,187	631	17.058	636	1,177	9.141	26.199
Maryland - - -	1,197	574	16.916	392	1,753	5.539	22.455
Delaware - - -	201	558	16.905	77	1,455	6.475	23.380
California - - -	524	725	16.176	301	1,262	9.281	25.457
Minnesota - - -	151	1,140	14.965	83	2,073	8.226	23.181
Ohio - - -	3,495	669	14.741	1,650	1,418	6.959	21.700
Wisconsin - - -	910	852	13.519	485	1,599	7.206	20.725
Indiana - - -	1,704	792	11.669	1,763	766	12.079	23.748
Kentucky - - -	1,742	663	11.131	1,669	693	10.665	21.796
Iowa - - -	748	902	10.773	878	769	12.646	23.419
Illinois - - -	1,948	879	10.545	2,329	735	12.602	23.147
Tennessee - - -	1,440	771	10.036	1,745	636	12.162	22.198
Virginia - - -	2,109	757	9.942	1,453	1,097	6.881	16.823
Oregon - - -	21	2,498	9.170	17	3,086	7.423	16.593
Kansas - - -	107	1,002	7.839	334	321	7.839	32.307
Missouri - - -	1,302	908	7.742	2,363	503	14.050	21.792
Louisiana - - -	843	839	7.244	1,384	512	11.893	19.137
North Carolina - -	761	1,304	6.394	1,503	660	12.626	19.020
Florida - - -	97	1,556	5.950	235	597	14.417	20.367
Alabama - - -	596	1,618	5.027	1,466	651	12.366	17.393
Mississippi - - -	554	1,428	4.853	1,710	463	15.002	19.855
Texas - - -	420	1,439	4.833	1,346	449	15.491	20.324
South Carolina - -	390	1,804	4.279	1,120	628	12.290	16.569
Georgia - - -	491	2,153	4.156	1,455	727	12.311	16.467
Arkansas - - -	329	1,323	3.878	1,510	651	17.800	21.678
United States - - -	48,803	899+	13.129	34,467	1,426	9.271	22.400

The result is not a little remarkable; and, as might have been expected, does not justify either the Northern or the Southern view, though it must be admitted that the Southern view accords most nearly with facts. If we arrange the States in the order of greatest fatality as shown by the proportion of persons living to one dead from consumption during the year, they read as follows:—Massachusetts, New Hampshire, Maine, District of Columbia, Rhode Island, Connecticut, Vermont, New York, New Jersey, Delaware, Ma-

ryland, Pennsylvania, Michigan, Kentucky, Ohio, California, Virginia, Tennessee, Indiana, Louisiana, Wisconsin, Illinois, Iowa, Missouri, Kansas, Minnesota, North Carolina, Arkansas, Mississippi, Texas, Florida, Alabama, South Carolina, Georgia, Oregon. In this list we seem to be travelling directly from north to south through the States, finding scarcely a State out of its place, the District of Columbia, Louisiana and Oregon being the only notable instances of displacement. The proportions range from one death in 254 persons in Massachusetts to one in 2,498 in Oregon. In twenty-one States the deaths are above the average (one in 899), all of which are as far north as Virginia, except Louisiana; and fourteen are below the average, all of them as far south as Virginia, excepting Minnesota, Iowa and Oregon. In regard to the latter (and the same may be said of the new Territories not here enumerated) the unusual immunity is accounted for by the nature of the population, mostly robust emigrants, and by their out-of-door lives. In regard to the new Northwestern States, about the upper Mississippi and Lakes, the same remark will to a great extent apply, in addition to the well-known freedom of these regions from great and sudden variability of climate.

If we arrange the States according to the percentage of deaths from consumption to deaths from all other specified *diseases*, excluding deaths from violence, which is a still more accurate test of the liability to consumption in any region, the sequence from north to south is still more exact. They then read, Maine, New Hampshire, Rhode Island, Vermont, Massachusetts, Connecticut, District of Columbia, New Jersey, New York, Pennsylvania, Michigan, Maryland, Delaware, California, Minnesota, Ohio, Wisconsin, Indiana, Kentucky, Iowa, Illinois, Tennessee, Virginia, Oregon, Kansas, Missouri, Louisiana, North Carolina, Florida, Alabama, Mississippi, Texas, South Carolina, Georgia, Arkansas. The coincidence of the two lists, considering that the data are only for one year, is wonderfully great. The percentages of deaths from this disease to deaths from all other specified diseases range from 29.90 in Maine to 3.86 in Arkansas. This range is surprisingly great; and however liable to slight fluctuations in reality, or from inaccuracies in registration, the great fact is demonstrated, so as to demand acceptance as a general law, that, other things being equal, consumption positively, uniformly, and largely diminishes as we proceed from the Northern to the Southern States. Seventeen of the States are above the average percentage (13.30), all of which are north of Kentucky; and eighteen are below the average, all of which are south of the same line, excepting Illinois, Indiana, Iowa and Oregon. In fact, a line drawn east and west through the States, at about the 38th or 39th parallel of latitude, somewhat variable in direction, as all isothermal lines are, striking about the middle of the course of the Ohio river, would separate the territory where the percentage of

deaths from consumption exceeds the average percentage for all the States, from the territory where it is below.

The above figures respecting the several United States enable us to take another decided step in the etiology of consumption, and to draw another line within which the truth as to its cause must lie. As this line is indicated solely by latitude, it follows, at least it is fair to infer, that cold is the agent concerned; and that cold must be added as another element no less obvious than moisture in the genesis of this disease. The well-observed fact that monkeys, serpents, and a large proportion of the tropical feline animals, when removed to cold climates, die of tuberculosis, has a significant bearing on this point. Nor can it be said that it is the mere degree of cold which has so marked an influence in inducing or fostering the disease, for we find the Northwestern States about the great Lakes—Iowa, Minnesota and Wisconsin—standing high on the list of immunity, though quite as far to the north as New England. These two districts lie between 41 and 47 degrees of latitude; and according to the records kept at military stations, the average annual temperature in New England is $45^{\circ}09$ of Fahr., and $44^{\circ}34$ in the Northwest District; the number of inches of rain in the former forty-one inches, and in the latter thirty and a half inches, showing a very great similarity of climate, so far as heat and moisture are concerned. The extremes of heat and cold in the two districts are very nearly alike also, being 104° to -32° , a range of 136° , in New England; and 104° to -38° , a range of 142° , in the Northwest. The comparative frequency and rapidity of the changes, in other words the temporary variability of the climate, it is not easy to ascertain. Yet in the New England States the average of deaths from consumption to deaths from all other specified diseases is about 25 per cent., and in the Northwest it is but about 14 per cent.

No one will be disposed to doubt the validity of Dr. Bowditch's *law*, as he terms it, that moisture is one of the main causes of consumption, everywhere else as well as in New England; and *soil-moisture* may be more pernicious than other moisture. But it would seem that moisture alone cannot be the sole or principal cause, any more than cold; for in all the low grounds and damp atmosphere of the South and Southwest there is comparatively little consumption. The writers quoted by Dr. Bowditch—Drs. Forry, Drake, Blodgett and Lawson—as we understand them, do not lay any particular stress upon moisture alone as a proximate cause. The Report of Dr. Coolidge on the health of the U. S. Army, throws very little light on this subject. The military stations referred to are mere points, chosen simply for strategic purposes, and do not represent the general conditions of the territory around them; their occupants are not denizens, but gathered from all quarters of the country and from all nationalities; their stay is transient; and the small and widely diverse proportions of those dying to those treated show how valueless the re-

turns are in this respect. For instance, of the 21 cases treated in New England, only 6 died; of 26 treated at St Louis, 24 died.

These two lines of investigation, that of Dr. Bowditch and the returns of the United States Census of 1860, show, we think, that cold combined with moisture, in other words *cold moisture*, is the meteorological condition which exercises the principal agency in the induction of consumption; and that neither agent, without the other, can have any very controlling influence as its cause. As a concomitant and subsidiary influence, great and sudden changes, *variableness* of climate, must be added in determining this as well as other diseases. Favorable and unfavorable limited localities, on a small as well as on a large scale, are shown to exist, both by the researches of Dr. Bowditch and by the census. Moisture on a northern slope and driven by north or east winds will be more potent in inducing diseases than moisture on a southern slope, or driven by south or west winds. We refer in this remark to winds on our Atlantic coast. Warm moisture and dry cold, we apprehend, will ever be found favorable to exemption or relief from consumption. But rain does not always mean moisture, nor heat dryness, in a meteorological sense; and the whole subject is so connected with the physical laws which regulate dryness and moisture as to demand much further research and generalization before the real telluric and climatal conditions most likely to develope or mitigate consumption can be determined. We can only claim to have determined one of the elements in the problem.

As the rate of mortality from all causes is larger at the South than at the North, it being one in every 67 of the living population in the Gulf States, and only one in 74 in the New England States, the inquiry arises, what class of diseases has taken the place of consumption in its regular decrease from North to South. We know that fever, in its various forms, is the disease most prevalent and most fatal at the South. The opinion has been expressed that moist, intermittent-fever countries are not liable to consumption. The deaths from fever of all types have been shown in connection with consumption in the table given in this paper. It will be seen that, in the order of fatality, the list of States is nearly reversed. The causes of fever being of miasmatic origin, are liable to greater variation than those of consumption, and the sequence of States in regard to fever would be less constant than in regard to consumption. But the generally reversed sequence in regard to these two diseases is sufficiently remarkable. The extremes in the case of consumption are 3.86 per cent. of deaths from all specified diseases in Arkansas, and 29.90 per cent. in Maine; the extremes in the case of fever are 3.25 per cent. in Connecticut, and 24.46 in Kansas. But if we add the percentages from the two causes in each State, the extremes are reduced to 16.54 per cent. in Oregon to 32.30 in Kansas, the average for all the States for the two diseases

being 22.4 per cent.; so that these diseases are to a very great degree complementary to each other.

RUPTURE OF THE UTERUS—RECOVERY.

BY BENJAMIN CUSHING, M.D., DORCHESTER.

[Communicated for the Boston Medical and Surgical Journal.]

NOVEMBER 9th, 1859, I was called to see, in consultation with Dr. J. H. Warren, of Neponset, Mrs. K., Irish, aged about 32, then in labor with her first child. The patient had been in labor for a long time, the os uteri was fully dilated, and the membranes were broken, but the child had made no advance. It was deemed best to turn and deliver. This was accomplished only after reducing the size of the head by perforation through the "foramen magnum." The patient recovered without any trouble.

Dec. 9th, 1860, I was again called by Dr. Warren to this same woman, again in labor. I saw her between 9 and 10 o'clock, P.M. At 6, P.M., her pains, after long continuance, had suddenly ceased. There had been vomiting, with extreme prostration. Stimulants had been freely given. On laying my hand upon the abdomen, I felt what seemed to me to be some part of the child, with only the abdominal walls interposed between it and the hand. Examining per vaginam, I could just reach the head. The child was turned and extracted, as before, after perforation through the foramen magnum. The placenta followed without any difficulty.

Wishing to verify our diagnosis, I again passed my hand into the vagina, and found a rupture in the side of the uterus, which extended completely through the neck. Through this rupture I passed my hand to the umbilicus, where it could be distinctly felt by Dr. Warren. I could feel and grasp the intestines. The patient recovered, and her case was published by Dr. W. in this JOURNAL for March 21, 1861.

I did not again see the patient until the latter part of last May, when curiosity led me to look her up, to know if she had been again pregnant. I found her expecting to be confined within a week or two. She requested my attendance, which I promised her, Dr. Warren having joined the Army. I directed her, on the first symptoms of labor, to see that the rectum was evacuated, and to send for me immediately.

June 21st, 1863, I saw her at 2 o'clock, P.M. The os uteri was well dilated, and the pains were just commencing. The membranes were broken. On examination, I found the funis in the vagina, but could not reach any part of the child. Aided by Dr. Blanchard, of Neponset, I etherized the patient and proceeded to turn. On passing my hand I felt, first the funis, secondly the hand, and lastly the head. The arm was lying by the side of the head. I brought

down the feet, but found much difficulty in extracting the hips, and still more in bringing the shoulders. This having, however, been accomplished, I perforated the head through the foramen magnum, and delivered the patient of a child weighing between nine and ten pounds. She recovered without any untoward symptom.

I am unable to give the exact dimensions of this woman's pelvis, but can only say it was so contracted that I am convinced by no possibility could a living child, of the above-named weight, have been born.

This is the second case of rupture of the uterus to which I have been called. The first was fatal.

August 28th, 1863.

AMPUTATION IN GUN-SHOT FRACTURES OF THE THIGH.

[Translated for the Boston Med. and Surg. Jour. from the "Traité de Chirurgie d'Armée," par L. Legouest.

By DAVID W. CHEEVER, M.D., BOSTON.

SECOND PAPER.

On the Time of Amputation, whether Immediate, Mediate, or Utterior.

On the general Results of Amputation; and also an Inquiry into the relative Success of Amputations in the English and French Forces in the Crimea.

TRANSLATION.

Not only is it important to determine the indications for amputation, but also the proper moment to operate. Amputations have always been divided into those done immediately, or a very little while, after the injury, and those done at a period more or less remote from the accident. The following table, which we borrow from Jules Roux, serves to explain the expressions made use of by different authors to designate the time when amputations are performed.

Authors.	1st Period.	2d Period.	3d Period.
Faure et Boucher.	Immediate. [ry.	Secondary or late.	
Larrey.	Immediate or prima-	Consecutive.	
Dupuytren.	Primary.	Consecutive.	
Boyer.	On the spot.	Late.*	
S. Cooper.	Immediate.	Consecutive. [dary.	
Velpeau.	Immediate.	Consecutive or second-	
Vidal (de Cassis).	Immediate.	Secondary.	
Baudens.	Primary. [ate.	Consecutive. [utive.	
Lisfranc.	Primary or immedi-	Secondary or consec-	
Nélaton.	Immediate.	Consecutive.	
Malgaigne.	Immediate.	Secondary.	
Fenwick.	Primary.	Secondary.	
Alcock.	Primary.	Intermediary.	Secondary.
Sédillot. [selin.	Immediate. [ate.	Retarded. [dary.	
Denonvilliers et Gos-	Primary or immedi-	Consecutive or second-	
Legouest.	Immediate. [ry.	Mediate.	Utterior.
H. Larrey.	Immediate or prima-	Consecutive.	Late or utterior.
		Mediate or Second-	
		dary phases	
		Phlegmonous, or of	Late.
		Osteo-myelitis.	Utterior.
J. Roux.	Immediate or prim'y.		Consecutive.

* Tardive.

Some surgeons consider as amputations of the first period only those which succeed, so to speak, the accident, or are performed a very little while after it: others take twenty-four hours for the extreme limit: for us, an amputation is *immediate* when it is performed before the development of the phenomena of inflammation, which may show themselves after a few hours, or only after many days have elapsed. The majority of surgeons class in the second period all amputations which are not immediate. We must establish a distinction between amputations done during the period of acute inflammation, and those which are performed after the inflammation has lost its violence and is entirely quiet. We designate by the name *mediate* those amputations done during the inflammatory stage; and by the name *ulterior* those done after the lesion has become, so to speak, local, and resembles a chronic affection.

Immediate Amputation.—Numerous discussions, as far back as the Royal Academy of Surgery, have changed the exact appreciation of the necessity and the time for amputation after gun-shot wounds. Letting these debates pass, we will say that the absolute necessity for an operation governs the whole question. When amputation is inevitable, it ought to be done immediately, that is to say, as soon as possible, before the appearance of fever. Whatever may be said, we substitute, in fact, a wound less severe, for one more severe, whose complications must be fatal. This rule has no exception but the total removal of the lower extremity, at the hip-joint, as we have formerly shown.

Mediate Amputation.—When inflammatory complications have made their appearance, amputation ought to be postponed as long as possible, until quiet is reëstablished. But often these complications do not diminish; and their violence is sometimes so great that we are obliged to amputate at the height of the inflammation, for fear the wounded man may succumb. The period of mediate amputation may last from a fortnight to a month, and it is above all towards its close that it is best to operate; but here the surgeon often finds himself in a quandary from which it is difficult to escape. Is it better, at this late period, to sacrifice or to preserve the limb? The wounded man, having passed through the earlier dangers, can he not accomplish a complete recovery without amputation? In such a case the decision to be made rests entirely on the diagnosis and prognosis of the affection. Amputate, when the general conditions are bad; that is to say, when the wounded must be transported; when the hospitals are crowded; when epidemics prevail; when very acute inflammation has invaded the bone for a considerable extent, or when the suppuration has dissected up and infiltrated the limb: you will save very few of your operations, it is true, but you will save less wounded if you do not operate. The opportune moment is difficult to seize; if it once escapes us, often it does not return; it is for the sagacity of the surgeon to know

how to seize upon it. Under opposite conditions, do not amputate; allow the period for a mediate operation to pass by, and seek for that of an ulterior amputation.

Uterior Amputation.—The period for ulterior amputations has, so to speak, an unlimited duration. It commences after the cessation of the symptoms of acute inflammation, that is to say, three weeks or a month after the injury, and lasts for many months, and even years. In its first phase, extensive suppuration, hectic fever, or emaciation, and in the last, the chronic alterations of bone, constitute the indications for operation.

Amputations which are indispensable ought, then, to be done at once; mediate and ulterior amputations should be retarded as long as possible.

Comparative Results of Immediate, Mediate and Uterior Amputations.—The results of immediate amputation are more favorable than those of mediate amputations; and the results of the latter are less favorable than those of ulterior amputations. These last resemble very much the amputations which Malgaigne called *pathological*, and which he considered as much less dangerous than traumatic amputations; pathological amputations being performed for a chronic affection of the limb, and traumatic amputations for accidental lesions. The observations of our predecessors, on the results of amputation performed at different periods, have been partly confirmed by the experience of our recent wars. In the English Army, the immediate and the mediate operations performed in the Crimea, from April 1st, 1855, to the end of the war, were:—

		Deaths.	Percent. of Deaths.
Immediate operations,	690	175	25.3
Mediate operations,	89	38	42.7

In the hospitals of the Bosphorus, from September 26th to November 27th, 1854:—

	Deaths.	Under Treatment.	Recoveries.	Percentage of Deaths.
Immediate operations, 154	18	40	96	11.6
Mediate operations, 65	42	7	16	64.6

The proportion of deaths after primary amputations is larger in the Crimea than in the hospitals of the Bosphorus, where those operated on were placed at once under good circumstances; on the other hand, it is smaller after mediate operations, because at the period when these were done in the hospitals of the Bosphorus, these crowded establishments presented no longer as favorable conditions as the ambulances of the Crimea. In the French Army, all the amputations, not including those of the phalanges of the hand, the metacarpal bones, or the toes, amounted, during the whole campaign, to 4,467, classed as follows:—

		Deaths.	Recoveries.	Percentage.
Immediate operations,	3,234	2,337	897	72.2
Mediate operations,	852	600	252	70.4
Time not determined,	381	194	187	51.
	<hr/> 4,467	<hr/> 3,131	<hr/> 1,336	

Among these there were 120 double operations, which gave :—

		Deaths.	Recoveries.	Percentage.
Immediate operations,	53	38	15	71.7
Mediate operations,	67	51	16	76.2
	120	89	31	

The primary operations performed in the English army gave, on the one hand, 25.3 per cent. of deaths, and on the other, 11.6 per cent. : and the secondary operations, 42.7 and 64.6 per cent. of deaths : the advantage rests, then, with the primary over the secondary. On the contrary, in the French army, the primary operations gave 72.2 per cent. of deaths, and the secondary ones 70.4 per cent. : there is a slight difference, then, in favor of the latter. But we must consider that the operations whose period is undetermined gave only 51 per cent. of deaths ; that it is very probable that they were primary operations, and that by adding them to the primary ones, these present a mortality of only 70 per cent. There would be, then, but an insignificant difference between the primary and secondary operations done in our ranks, in the Army of the East. We shall explain, presently, the increased loss among our operated, compared with those in the English army.

The remarkable statistical researches of Malgaigne, on the capital operations done in the hospitals of Paris, and the more recent ones of M. Trelat, appear to establish beyond doubt the superiority of pathological amputations over traumatic ones.

	Amputations.		Deaths.	Percentage.
MALGAIGNE.	{ Pathological,	343	176	51.3
	{ Traumatic,	166	104	62.7
TRELAT.	{ Pathological,	568	223	39.3
	{ Traumatic,	470	261	55.6
	{ Undetermined,	106	28	26.4

General Results of Amputations.—Some surgeons, and among the most eminent Malgaigne and Velpeau, while allowing amputations in cases where they are indispensable, are inclined to perform as few immediate amputations as possible ; and think they can lay down as a general law, that attempts to preserve the limb, in every case, do not expose the patient to more chances of death than amputations do.

This dictum cannot be adopted as a general rule in military surgery ; the difference in the results which can be attained in the field, or in civil hospitals, is very great, and depends upon causes which we have previously enumerated. We are obliged to confess that the general results of amputation do not give a great sum of successes ; but it is also just to acknowledge that the partial comparative statistics of success after amputation or without amputation, including even those which we have brought forward on fractures of the thigh treated by the preservation of the limb, or by amputation, are not yet complete enough to establish a law ; and that, thus far, they only approximate the solution of the problem, without settling it definitely.

The general mortality after amputation has been very variable under different circumstances, and according to the returns furnished by different surgeons: Boucher estimates that two thirds of those amputated succumb; Faure assures us that after the battle of Fontenoy (1745), 300 amputations gave only 30 or 40 successful results; Bilguer reduces down to one or two the successful cases of amputation performed during the seven years' war (1756). Larrey, recalling all his recollections, after thirty years of war, thought he had saved three fourths of his amputated. A. Blandin, Surgeon of the Republic, says, that with careful after-treatment we may hope to save three fifths of those operated on. These are estimates without figures and without rule: we shall find in the following table data, which, without being rigorously exact, are yet more certain, by reason of the very considerable numbers on which they are based:

	No. operated on.	Deaths.	Percentage.
Naval battle, Brest (1794),	60	2	3.3
Battle of Newbourg (1794),	106	8	7.5
Naval battle, Aboukir (1798),	30	0	0
Ditto in Frency army,	14	3	21.4
Campaign of New Orleans,	52	12	23.1
Battle of Toulouse,	99	32	32.3
Battle of Waterloo,	372	191	51.4
Naval battle, Navarino,	58	14	24.1
Paris, Gros Caillou (1830),	17	9	53
Paris, Hôtel Dieu (1830),	24	17	70.7
Paris, Roux (1830),	14	7	50
Paris, Saint Louis (1832),	15	11	73.4
Siege of Antwerp (1833),	64	14	21.9
Spain (1836-37),	77	36	46.8
Expedition of Constantine (1837),	23	17	73.9
Paris (1848),	120	56	46.6
Paris (1848),	14	9	64.1
Danish Army (1848-50),	243	96	39.5
Crimean war (English army),	998	273	27.4
{ Crimean war (French army), }	4,466	3,131	70.2
{ Capital operations only. }			
Totals,	6797	3,916	57.63

The 6,797 operations brought together in this table, give a mean of 57.63 deaths per one hundred.

Enormous differences exist between the ratios of mortality, taken singly: it is during the expedition of Constantine that the mortality was the largest, 73.9 per 100. Then come successively, that of St. Louis, in 1832, 73.4 per cent.; Hôtel Dieu, 1830, 70.7 per cent.; French army in the Crimea, 70.2 per cent.; Val de Grace, 1848, 64.1 per cent.; Gros Caillou, 1830, 53 per cent.; Waterloo, 51.4 per cent., and Paris, in 1830, according to Roux, 50 per cent.

The unfortunate circumstances in which the wounded were placed during the disastrous expedition of Constantine, during the long war of the Crimea, after the fatigue of a battle of giants like Waterloo, in the crowded wards of St. Louis and the Hôtel Dieu; and

also the painful moral position of both military and citizen wounded, victims of the street combats of a revolution, appear to us sufficient to explain this great mortality.

The small mortality after operation in certain battles, as Aboukir, English army, 0 per cent.; naval battle of Brest, 3.3 per cent.; Newbourg, 7.5 per cent.; Aboukir, French Army, 21.4 per cent.; Antwerp, 21.9 per cent.; New Orleans, 23.1 per cent.; and Navarino, 24.1 per cent., appear more difficult to understand.

It is rather remarkable that operations performed after naval combats have given, generally, less mortality than others; it may be attributed, perhaps, to the distribution of the wounded among a large number of vessels; to the robust and seasoned constitution of sailors; to the absence of any derangement of their habits; the ship being their habitation, and becoming their hospital after having been the field of battle. We must observe, also, that Newbourg, New Orleans and the Siege of Antwerp, which gave the smallest mortality after operations, were short and successful campaigns, during which the troops had not time to become fatigued, and were surrounded with care and resources innumerable. It is well to know that at the beginning of a campaign, the surgery is generally pretty successful; but, in proportion as the war is prolonged, it must be practised upon men in worse conditions, and can count upon less and less numerous successful cases.

This is the great cause of the sad mortality of our operations in the Crimean campaign, amounting to 70.2 per cent.; and to this cause are to be added the inclemency of the climate, epidemics, and the overcrowding of our hospitals. There is reason to be surprised at the relatively small mortality of those operated on in the English Army, our ally in this campaign; their ratio of 27.4 per cent. is almost the same as the 25 per cent. computed by Larrey after thirty years of war. The superior success of English surgery over French is shown as much in civil as in military practice; it so greatly astonished our surgeons, that certain surgical statistics from beyond the channel, recently published in France, have been warmly attacked, and thought to be vitiated by manifest errors.

For our own part we accept the statistics given in the work entitled, "Medical and Surgical History of the British Army which served in Turkey and the Crimea during the war against Russia, in the years 1854, '55, '56," which was presented to Parliament in 1858. We must remark, nevertheless—1st, That the number of operations, given as 998, and of deaths 273, should really be increased to 1080 operations, and to 310 deaths, after counting up the English statistical tables; whence it results that the mortality was 28.7 per cent. instead of 27.4; 2d, That 737 amputations out of 1080, while not fully recovered, were transferred from the Crimea and Scutari to England, and that they are all designated as recoveries.

The difference of mortality, 1.3 per cent., between 27.4 per cent., the ratio of the original tables, and 28.7 per cent., the ratio of the tables as revised, is not important enough to delay us here. But we cannot omit noticing the uncertainty which prevails about the fate of the 737 amputations transferred to England, and carried out on the tables as recoveries. Has no one of these cases of operation succumbed, from the day of the transportation to 1856, the period at which the surgical history of the English campaign ends, with the war? Have all those amputated entered at Chatham, to the number of 667, survived their wounds? We may reasonably doubt this, when we remember how many of the French operations died during their transportation from the Crimea to Constantinople, and from that city to France, and even later than this; and since we know how many fatal complications may arise during the cicatrization, and before the perfect recovery from an amputation. It is almost certain that the authors of the English statistics have not entered in their column of mortality, prematurely carried out, the losses resulting from secondary or ulterior accidents of amputation, and that they have thus given, without meaning it, an average of deaths below the reality; whilst that in the returns of the French army, the result of operations is not determined until the 31st December, 1857; that is to say, eighteen months after the campaign, and even then that those only who are discharged and pensioned are counted as recoveries; the long period of time embraced by these statistics comprises thus both the immediate and the consecutive results of operations.

These considerations may detract a little from the registered success of the English surgery in the East, but they do not explain the numerous failures in our practice during the same campaign. Observations of a different kind give us more positive results, and those, too, of primary importance. The larger the army, the more numerous the sick and wounded, and the greater also the mortality and the suffering, notwithstanding the best precautions, and the most liberal provision of administrators, and of the medical staff. The effective strength of the English army in the Crimea has never been as great as ours; it has not surpassed 97,864 men, while ours has been 309,000 men. Their effective force was wholly renewed, and not completed before the Spring of 1855; ours has received only successive contingents. The number of the English wounded was only 12,164; while ours was 39,868.

In the discussions in the Academy of Medicine in 1862, to which the surgical statistics of the Civil hospitals of London gave rise, much was said of the hygienic arrangements, the material resources, and the commisariat found in these institutions, and brought forward as being much superior to ours. We do not possess any documents on the subject; but during the Crimean campaign every one saw the English ambulances and hospitals, at first only tolerably organ-

ized, improve rapidly under the efforts of the Commissioners with full powers sent from London to inspect them, and acquire, both in regard to the buildings, the furniture and the clothes for the sick, as well as in their diet-lists, a degree of comfort, which our establishments, much more numerous, could not equal, in spite of the zeal, devotion and efforts of the medical and administrative staffs. It must also be added, that the transportation of our sick from the Crimea periodically crowded our hospitals at Constantinople, and perpetuated there pyæmia and hospital gangrene; while the English transports, necessarily less numerous than ours, were, almost all, at once directed to the mother country; and that the wounded and cases of operation of the English army did not quit the Crimea until they were already in a fair way for recovery, while the French wounded and operated were either sent off at once, or a few days after their wounds, to make room for others, who succeeded them uninterruptedly. If transportation is an excellent measure, it is so only on the condition that it is applied to men really in a fit state to be transported; when the necessities of war oblige us to transport indiscriminately all the wounded and operations of the day or the night, not only in order to avoid crowding, but also to make room for new cases, then transportation can have only unfortunate results. It was not possible for us, in a military point of view, to retain, upon the hostile territory of the Crimea, any considerable number of wounded, who might have become a serious embarrassment to the command, in case of retreat or re-embarkation.

All unprejudiced minds will find in these differences of condition, imposed by events, the reason of the differences in the results obtained. Perhaps, also, in order to embrace all the elements of the question, we must take into consideration the influence which the race, the hygienic habits and the food of those who undergo operations, may have upon the success of them; it is a last resource to explain, in a general way, the results of the English surgery, the success of which seems sometimes to belong to the miraculous.*

Dr. Nelligan, of Dublin, expired on the night of the 23d July, in the forty-eighth year of his age. As a practitioner, he had arrived almost at the head of his profession, and had earned for himself a high reputation by his medical writings, particularly by his popular work on "Medicines, their Uses and Mode of Administration."

* When the results of the vast statistics of the present war in America come to be consolidated at some future day, we anticipate that they will prove the surgery and the hygiene of our armies to have been no less successful in recoveries from wounds and operations than the English were. This we may fairly infer from the results which have been tabulated thus far. Any who are interested in military surgery will find in the work of Dr. Legouest much that is novel, valuable and instructive in all branches of the service. Those who desire may find a lengthy and elaborate *revue critique* of the book in the *Archives Générales de Médecine*, 5e série, tome xiii., 1859.

Bibliographical Notices.

The Nature, Causes and Treatment of Nervous Deafness. Translated from the French of "DUCHENNE," with additions, by LAURENCE TURNBULL, Aural Surgeon to, and Lecturer on Aural Surgery at, Howard Hospital, Philadelphia, &c. &c. Philadelphia: Lindsay & Blakiston. 1863. 1 vol. 12mo. Pp. 119.

THE above is the title of a small treatise on Nervous Deafness, which has just appeared from the pen of Dr. Laurence Turnbull, of Philadelphia. Nervous deafness is a subject of great obscurity, and we gladly welcome anything which tends to throw any light upon it. We therefore opened the book with great interest, hoping to find in it some original observations upon this important and obscure department of aural surgery. In this respect we were somewhat disappointed, though the book is by no means devoid of interest or value.

Its largest portion consists of a translation from the French of Duchenne; its last thirty-three pages, of additions by the translator. The chief value of the first part consists in the physiological study which it contains, of the chorda tympani nerve, and of certain electrophysiological phenomena, which M. Duchenne observed. These are interesting and valuable, and we think Dr. Turnbull has done good service by giving to them an English dress. We cannot say as much for the electro-therapeutics, which follow the observations. M. Duchenne is an enthusiast in his special study of electricity, which he has done so much to introduce to the medical profession. This enthusiasm sometimes leads him to make extravagant statements of the value of electricity in therapeutics. Such, we think, is the case in the work before us. Whoever reads Dr. Turnbull's translation will be likely to form, from that alone, a very erroneous idea of the power of Faradization in relieving what is called nervous deafness. That it occasionally does good, we do not doubt. But quite a number of experiments, meaning by that expression thirty or forty—and probably more, upon patients of different ages, and of both sexes, and made in the way indicated by M. Duchenne, and perseveringly continued, have not produced, in our hands, the results obtained by him. We are therefore compelled to adopt the language of M. Becquerel, in his late work on the "Applications of Electricity to Therapeutics." He says, in his chapter devoted to the ear, "In conclusion, I believe myself perfectly authorized to say, that electro-magnetic currents are of no real efficacy in the treatment of nervous deafness, when this is essential and not symptomatic." In sympathetic affections of the ear, we have no doubt that an electric current is sometimes of value. Yet we do not wish to discourage experiment in this direction. Enough has been accomplished, as the monograph, whose title stands at the head of this notice, proves, to encourage further effort; but not enough, we think, to warrant the assertion which it contains, that "the preceding facts *superabundantly demonstrate* that the Faradization of the chord of the tympanum and of the motor muscles of the little bones, when applied to the treatment of nervous deafness, produces the happiest results."

Dr. Turnbull's "additions" present a very good account of the existing state of knowledge with regard to nervous deafness, though

they are by no means exhaustive of the subject. We hope he will go on in the way he has begun, and by and by give us a complete treatise on nervous deafness—a subject whose importance is only equalled by its obscurity.

E. H. C.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 10, 1863.

PROFESSIONAL FEES.—The subject of professional fees is one of ever-recurring interest and very frequent embarrassment to the medical practitioner. It forms an unfailing topic of mutual discussion in the daily intercourse of physicians, and its difficulties and perplexities are a fruitful source of annoyance and vexation. Notwithstanding all the efforts that have been made to fix a regular standard of charges, every physician must often feel that this cannot represent fairly, in very many cases, the value of his services, and yet it is very difficult to bring the mind of the community to the true point of view. Popularly, the members of the medical profession are looked upon as a class who earn their money easily. To a man who gets his daily bread by the sweat of his brow, it seems a very easy thing to pass judgment upon a case and prescribe treatment, in an interview of a few minutes, and it comes rather hard to him to pay even the minimum fee for such a service. To a sensitive physician, also, it is no pleasant thing to exact the customary compensation in such cases, and the abrupt question, “how much do you charge, doctor?” produces in time a feeling very like meanness and self-reproach. On the other hand, where there are abundant means on the part of the patient, such a man will feel that he does himself injustice, where an important professional service has been rendered, even when he charges what is generally regarded as the proper maximum. For how can a service, where, under Providence, the physician may be said to hold the scales of life or death, be compensated by any sum, however large, which professional usage permits him to demand?

It is greatly to be desired that there should be more uniformity in this matter with the profession at large. Here in Boston we have adopted a sliding scale, after much deliberation, as affording the best chance of securing adequate compensation and adapting the rate of charge to the means of the patient. We are inclined to think, however, that this does not remove the difficulty or do much towards equalizing fees among our professional brethren. We hear young men among them complaining with bitterness of some of the more advanced members of the profession, that they constantly attend patients in good circumstances for less than the maximum fee, thus securing to themselves a wider range of practice and preventing the less prosperous portion of the profession from making what is really a just charge. This allegation is made with peculiar emphasis against some successful practitioners whom we might name, and, if true, it certainly implies a great want of regard for their brother physicians and a great want of self-respect. It should be a point of honor with every physi-

cian to keep these considerations in mind. Men of education and talent cannot and will not devote their energies to the practice of a profession which does not give them adequate remuneration, and it certainly is the interest of the community that the care of the public health should not fall from such hands into those of mere bargainers and competitors for cheap business. The community at large do not, as it seems to us, show that appreciative sense of obligation under which they are placed by the devoted labors of the medical profession. How rarely do we hear of a legacy or a liberal gift from a grateful patient, over and above the amount charged on the bill! There are exceptions to this, we know, but they are not common. Our recent mention of the large fees received by the surgeon of the King of Belgium and the accoucheur of the Empress of Russia, has prompted a friend to remind us of even a larger sum than either of those fees left as a legacy some years since to one of our Boston physicians, who is still in active practice. The circumstances are so peculiar that they are worth relating, although some of the facts are undoubtedly well known to a portion of our readers.

Dr. — was called to the wife of a neighboring physician, who was in difficult labor. The husband delegated to him the responsible duty of delivering by forceps, which he accordingly did at once, and left the house after a stay of twenty minutes. The mother and child did well; no second visit was necessary. Of course no charge was made to a fellow practitioner, and the circumstances of the case were consigned to the dusty shelves of past professional experience. *Forty years* after, Dr. — was notified that he had become the heir to a magnificent legacy from the lady whom he had so relieved in her hour of peril. The statement was so incredible that it required strong persuasion to make him believe it. The lady died a widow and childless, having lost her daughter at the age of seven years. The amount of the legacy was 10,000 dollars in personal property, which was paid at the time, and a share of a valuable estate—said share being valued at 10,000 dollars. Circumstances have prevented the estate as yet from being sold or divided. The present value of this property is undoubtedly much greater than it was at the time of the decease of the former owner, as forty thousand dollars have been offered for a portion of it which was at that time valued at twenty-five thousand dollars. So that on the whole our friend is safe in reckoning the amount of his legacy as at least from twenty-five to thirty thousand dollars. Expressed in francs, this throws into the shade Mr. Thompson's 100,000 and Prof. Scanzoni's 30,000. But then it must be remembered that the grateful testatrix was the wife of a physician, and was able to appreciate the value of the services of a faithful member of the profession and the inadequacy of the remuneration in too many instances. Not the least curious circumstance in this history is, that the recipient of this munificent legacy never again saw the lady, from the moment when he delivered her with the forceps forty years before!

REMOVAL OF EXAMINERS OF PENSION CLAIMANTS.—We learn that Dr. Graves, of Chelsea, and Dr. Shaw, of Boston, have been summarily removed, and Dr. Sprague as summarily suspended from the duties of the office of examining surgeons of candidates for pensions, on charges preferred by an unknown person, and without an opportunity of refu-

tation or explanation on their part. No one acquainted with these gentlemen can believe for a moment that there can be the least just ground for such a high-handed proceeding. This has been done just at the time when the biennial examination was to take place, throwing the whole business of this examination upon a single surviving examiner, greatly to the inconvenience of the unfortunate claimants, who often come from great distances and are subjected to needless expense and delay by this state of things. Who is at the bottom of this? The profession have a right to know who it is that has thus ventured to trifle with the professional reputation of these gentlemen.

SARRACENIA PURPUREA IN THE TREATMENT OF VARIOLA.—Dr. A. N. McDowell, Acting Ass't Surgeon in the United States General Hospital at Trenton, Mo., reports the results of his treatment of 43 cases of smallpox in that hospital. The general treatment was by the use of stimulants, lager beer being allowed *ad libitum*; the diet, eggs and milk. The purely medical treatment was in the use of the *sarracenia purpurea*, or pitcher plant. An ounce and a half of the leaves to a quart of boiling water was boiled down to a pint and a half, and a wineglassful given every six hours. It was administered in 36 of the 43 cases. One case is reported. On the appearance of the eruption, the remedy was given. The eruption, instead of proceeding to suppuration as usual, began to dry up; the swelling of the parts diminished, the secondary fever was slight, and *all* the symptoms were mitigated. In a short time, instead of scabbing, the scales fell off like bran. The usual pitting was also prevented by this treatment, the scales as they came off leaving the face smooth. But four deaths occurred. Dr. McD. concludes his report in the *American Medical Times* by stating that "the conclusion is inevitable that *sarracenia* is a most useful medicine in variola."

USE OF ETHER IN SURGICAL OPERATIONS.—Dr. T. D. Lente, Surgeon to the West Point Foundry, publishes in the *American Medical Times* a tabular statement of thirty-three surgical operations performed by him with the use of sulphuric ether as an anæsthetic. These cases are furnished to show the fallacy of the objection urged against the use of ether by the advocates of chloroform on account of the *length of time* and the *large quantity* requisite when the former is used. Some of these operations were among the gravest in surgery, such as the amputation of the thigh and arm, and the removal of large tumors; a number of teeth were extracted—from six to fourteen having been removed during the etherization; the time required, however, in no case exceeded $6\frac{1}{2}$ minutes, ranging from that time to $1\frac{1}{2}$ minute. The quantity varied from $1\frac{1}{2}$ drachm to 16 drachms. The inhaler used by Dr. L. is made of coarse and stiff towels, folded in the shape of a cone, and a handkerchief or soft cloth, on which the ether is poured, is thrust into the apex of the cone.

ACTION OF QUININE IN PHTHISIS.—We find the following on the action of quinine in phthisis, in the *London Medical Times and Gazette*, to which it was communicated by Dr. Richard Payne Cotton, Physician to the Hospital for Consumption at Brompton.

"With the view of testing, so far as practicable, the general thera-

peutical value of quinine in the treatment of consumption, I prescribed it for twenty-five patients in various stages of that disease; avoiding, as in all my previous experiments, any selection of cases, and excluding only those unfitted by the existence of acute symptoms or special complications. The dose consisted, according to circumstances, of one or two grains two or three times a day, and was continued for periods varying from three to ten weeks. Notes were regularly taken by Dr. Harington, resident clinical assistant.

“Ten of the patients were in the first, six in the second, and nine in the third stage of phthisis. Sixteen were males, and nine females. Their ages varied from twenty to fifty years.

“During the administration of the quinine seven improved *greatly*, five improved *slightly*, and thirteen either did not improve at all or became worse. Of the twelve improved cases, seven were in the first stage, two in the second, and three in the third stage; and, of the thirteen cases in which the quinine seemed to be inoperative, three were in the first stage, and ten were the subjects of more or less advanced tubercular softening. Thus it would appear that whatever good may have resulted from the quinine, it was the most decided in the early stage of the disease.

“In fourteen of the cases cod-liver oil was taken during at least a portion of the time. There was an increase of weight in ten out of the twenty-five patients; such increase occurring in five who had taken the oil, and in five who had not taken it, but being most marked in the former.

“In four cases the quinine appeared to disagree, producing dyspepsia and loss of appetite. In six instances patients who had made little, if any, progress under the quinine by itself, were more or less benefited when steel was added to it. Two of these cases were remarkably good illustrations of the combined influence of quinine and iron; one was in an early and the other in an advanced condition of the disease, but both left the Hospital with every local and general symptom in abeyance, and their health fairly good, after taking for several weeks two grains of quinine twice a day, and a tablespoonful of steel wine immediately after dinner.

“From these facts, compared with previous observations on other remedies, the following are the conclusions at which I have arrived:—

“1. That although quinine may be well adapted to certain cases in which there is an evident cachexia, it is greatly inferior, as a general remedy in phthisis, to some other tonics, whilst in a few instances it is unsuited to the disease.

“2. That the combination of quinine and iron is sometimes very beneficial.”

OZONE AS A DISINFECTANT.—Dr. Delabrousse recommends the manufacture of ozone in the wards of hospitals, for the purpose of their disinfection. What we want is, he says, a proper supply of ozone—that is, of a body which is capable of decomposing, and so of neutralizing, the miasms constantly arising in hospital wards, and which at the same time is not hurtful to the patients. And thus, he tells us, the problem is solved. Ozone is such a body, and may be thus used. A spiral platinum wire is placed beneath an inverted funnel, and is rendered incandescent by means of Bunsen's pile. Hereupon the charac-

teristic smell of ozone is perceived in the heated air circulating above the funnel; and its presence is shown by the test paper. Thus may we obtain a ready and practical supply of ozone, and so insure the disinfecting of our hospital wards.—*Med. News*, from *British Med. Jour.*

ACCLIMATIZATION OF ANIMALS AND VEGETABLES.—A Society has been established in England, the object of which is the acclimatization, in the United Kingdom, of animals, birds, fishes and vegetables. By the introduction and domestication of new animals and vegetables capable of affording nourishment, and the perfecting and hybridization of tribes already domesticated there, it hopes to give to the people of England a more widely varied and more trustworthy store of aliments than either rich or poor have ever yet enjoyed. By the third report of this Society, just published, it appears that its success thus far has been very satisfactory.

LECTURES ON THE MICROSCOPE.—We would call the attention of our readers to the advertisement in this week's JOURNAL of Dr. Holmes's lectures on the Microscope. This is the first of the new University courses of lectures in the Medical Department, and cannot fail, from the well-known familiarity of the lecturer with his subject, and the charm which attaches to all his public discourses, to attract a large audience.

THE Fourth Decennial Revision of the Pharmacopœia of the United States has just been issued from the press of J. B. Lippincott & Co., Philadelphia. It is published under the authority of the "National Convention for revising the Pharmacopœia," held at Washington in the year 1860, and is offered at an extremely low price, in order to insure its general use by physicians and apothecaries throughout the country.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 5th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	51	67	118
Ave. mortality of corresponding weeks for ten years, 1853—1863,	51.6	53.1	104.7
Average corrected to increased population	00	00	114.72
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
25	1	1	2	0	5	3	21

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 5th, 118. Males, 51—Females, 67.—Disease of the bladder, 1—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 1—bronchitis, 3—cholera infantum, 21—colic (painter's), 1—consumption, 25—convulsions, 4—croup, 1—cyanosis, 3—debility, 2—diarrhœa, 9—diphtheria, 1—dropsy, 3—dropsy of the brain, 4—drowned, 1—dysentery, 5—epilepsy, 1—bilious fever, 1—scarlet fever, 1—typhoid fever, 3—gangrene, 2—disease of the heart, 3—infantile disease, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 3—measles, 1—old age, 2—paralysis, 2—premature birth, 1—syphilis, 1—unknown, 5.

Under 5 years of age, 62—between 5 and 20 years, 9—between 20 and 40 years, 23—between 40 and 60 years, 16—above 60 years, 8. Born in the United States, 89—Ireland, 22—other places, 7.

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No. 7.

EUROPEAN OPHTHALMIC INSTITUTIONS. No. V.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—As I spoke of Vienna as containing a galaxy of talent, so I may say, on the other hand, of Berlin, that it exhibits but a single star in the firmament of ophthalmological science. Professor von Graefe has, however, done so much, added so largely by his own observations to the revelations which we owe to the ophthalmoscope of Helmholtz, and made such valuable applications of these discoveries to practical use, that universal consent acknowledges him one of the stars of first magnitude.

The advantages offered at Berlin may be regarded as comprised within Graefe's "Klinik," which is a private institution for the reception of patients, comprising apartments for the accommodation of those able to pay larger or smaller sums, and rooms devoted to free beds. Patients are prescribed for every day, by himself or one of his assistants, and twice a week, in addition to a clinical lecture in the forenoon, at which interesting cases are exhibited, he has a consultation for out-patients, and performs operations, in the afternoon. His lectures are marked by clearness of demonstration, and are listened to with great attention by his class.

Most of the examinations requiring time, as those with the ophthalmoscope and those regarding the refractive or accommodative power of the eye, are made by one or other of his assistants; while he passes rapidly in review a large number of those suffering from acute or chronic forms of inflammation. Among these are numerous cases of catarrhal and phlyctenular conjunctivitis, and a very large proportion of the strumous forms of ulceration of the cornea in children. These latter are subjected to a prolonged forcible examination, but are otherwise mildly treated, on a similar plan to that pursued at the London Ophthalmic Hospital, where this disease is also one of the most frequent; local applications of atropia being combined with tonic general treatment. Numerous cases of ophthalmia of new-born infants also present themselves, which are

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treated by free applications of a crayon containing one, or two, thirds of nitrate of silver combined with nitrate of potash. After the cauterization, any excess of the remedy is neutralized by the use of a solution of chloride of sodium, followed by pure water. The same crayon is also applied in other forms of conjunctivitis, where the tumefaction is considerable and the secretion abundant. In other cases, of trachoma or chronic granulations, solutions of nitrate of silver are used, followed by salt and water and pure water.

I saw but one case of diphtheritic inflammation of the conjunctiva; but Prof. Graefe informed me that in the winter months it was extremely common and frightfully severe. Fortunately, this is not the fact, so far as I can learn, in other places on the continent, the disease being, as with us, of rare occurrence.

Another point in which Berlin exhibits a bad eminence, is the extreme frequency of glaucoma, which far surpasses the proportion observed in an equal number of patients elsewhere. We all know how much we are indebted to Prof. Graefe for the application of iridectomy to the treatment of this previously almost fatal disease, and it is to be hoped that as the affection comes to be better recognized, at its outset, by physicians, many cases may be saved, by a prompt recourse to surgical means as a remedy. Prof. Donders, of Utrecht, regards the disease as having its origin in irritation of the ciliary nerves, which has an influence in augmenting the secretion of the humors and increasing the intra-ocular pressure; and this, in its turn, tends to aggravate the primary pathological conditions, the morbid processes mutually re-acting upon each other. This theory explains the manner in which iridectomy may act in relieving the disease. There can be no question as to the certainty and safety with which the operation may be done, in all cases where the persistence of the abnormal pressure has not already induced destructive changes in the nervous structures; but it is important that the general constitution of the patient should receive attention, that a relapse may not supervene at a future period, from the action of the causes which have led to the first attack.

Whilst in Berlin I had the satisfaction of meeting Dr. Robertson, of Edinburgh, who has the honor of having introduced the Calabar bean into the ophthalmic materia medica, and of hearing from him an account of his experiments upon himself and upon animals. The application of the extract, or a solution containing the active properties of the bean, generally gives rise to a slight pain in or around the globe, and occasions very great contraction of the pupil, with myopia and loss of power of accommodation. In my own eye, the accommodative power was re-established in less than two hours after the effect of the bean had been produced, although the pupil continued small during twenty-four hours. Dr. Robertson had observed the same fact as to the duration of the effect upon the iris long after he had regained the ability to see objects clearly at ordinary distances.

The discovery of such an efficient agent, acting in an opposite sense to those remedies which dilate the pupil, will render most important services in enabling us to control mydriasis, and perhaps in various disorders of accommodative power. The importance of the discovery can be estimated by the attention which it is everywhere receiving from ophthalmologists, who are indicating their appreciation of its value in the warmest terms.

Utrecht, Holland, 23d July, 1863. Truly yours, H. W. W.

OBSERVATIONS ON STERILITY IN MAN; WITH CASES.

By T. B. CURLING, ESQ., F.R.S., SURGEON TO THE LONDON HOSPITAL, &c.

THE object of this communication is to show that a want of aptitude to impregnate may co-exist with the capacity for sexual intercourse, or, in other words, that man is subject to *sterility* independently of *virility*.

The author states that sterility in man may arise from the following causes:—

1. Malposition of the testicles.
2. Obstructions in the excretory ducts of the testicles.
3. Impediments to the escape of the seminal fluid.

1. *Sterility from Malposition of the Testicles.*—The author remarks that the opinion of John Hunter “that when one or both testicles remain through life in the belly they are exceedingly imperfect, and probably incapable of performing their natural functions,” is corroborated in a remarkable manner by the facts adduced in this paper. After describing the condition of detained testicles, the author states that the question to be considered is, whether a testicle that has not passed into the scrotum can secrete a fertilizing fluid. He assumes, as quite established, that to possess this property the semen must contain zoöspersms.

Having referred to the observations of Professor Goubaux on horses, and to those of Follin and Godard on man, the author remarks that the proofs adduced by these observers were not sufficiently cogent and numerous to establish the law that cryptorchies are infertile; and it could not be expected that assent should be given to results so remarkable and unexpected without evidence of the most convincing character. Opposite opinions continue to be entertained, and have recently been avowed by Dr. Alfred Taylor.

The author gives the particulars of two cases of double detained testicle in married men (cryptorchies) without children; and also two cases of single detained testicle, the second testicle, in one case, being completely atrophied, and in the other having been removed by operation. In all four cases the copulative powers were satisfactory; but the ejaculated semen was destitute of spermatozoa.

The author gives a table, which includes these four cases and five others, three described by Godard, one by Puech, and one by the President of the Society, making nine in all, in which the fluid ejaculated by men with retained testicles was submitted to examination and found to be destitute of spermatozoa. In confirmation of the results obtained in these cases, he deduces some observations made upon the lower animals by Messrs. Goubaux, Follin, and Godard; and he furnishes a table of eight cases in which the fluid found after death in the substance of a retained testicle—in the epididymis or vas deferens, or in the vesicula seminalis on the side corresponding to the misplaced gland—had been examined and found destitute of spermatozoa. They have not been found after death in the spermatic ways of a detained testicle in any one instance that he knows of.

The facts which have been brought forward as opposed to the conclusion that cryptorchies are sterile, are chiefly instances in which they are reputed to have procreated children. Three cases are cited: one recorded by Mr. Poland, another communicated by Mr. Cock, and a third by Mr. Durham. The author feels no little hesitation in calling in question the claims to paternity in these cases; but remarks that as yet no case has been found in which a retained testicle has been fully proved to be capable of secreting a fertilizing fluid. The observations collected in the paper seem sufficient to show that, as a rule, they do not; and though he sees no valid reason why there should not be exceptions, still the evidence is wanting to establish the exception in either of the instances of reputed paternity which have been mentioned.

2. *Sterility from Obstructions in the Excretory Ducts of the Testicle.*—After giving a brief account of Gosselin's researches, in which he showed that after attacks of gonorrhœal epididymitis the channel for the semen is temporarily and sometimes even permanently obstructed, causing, when the epididymitis is double, sterility, the author relates three cases occurring in his own practice of permanent obstruction in the epididymis of both testicles in married men whose wives were barren. In all three the patients had vigorous powers; but there was a total absence of spermatozoa in the ejaculated fluid. The author insists on the importance of careful and prolonged treatment in cases of epididymitis to obtain the removal of inflammatory effusions.

The author remarks that the passage of the semen from the testicle may be prevented by congenital absence of the vas deferens, which, if double, would occasion sterility. A case of the kind, in which the testicles were sound, had been observed by John Hunter.

The excretory duct of the testicle is liable also to be interrupted by tubercular deposits in the epididymis. It is well ascertained that this part is much more frequently the seat of tubercle than the

body of the gland, and is often extensively diseased, whilst the substance of the testicle remains sound. The author gives a case in point, in which the semen was destitute of spermatozoa.

3. *Sterility from Impediments to the Escape of the Seminal Fluid.*—It is well known that a close stricture of the urethra so completely interrupts the passage of the seminal fluid, that in ejaculation it regurgitates into the bladder, where it mixes with the urine. In erection of the penis, the urethra becomes narrowed, so that a stricture which offers but a slight obstacle to the flow of urine may under congestion be sufficient to impede the emission of semen. The author has grounds for concluding that sterility from chronic stricture in the urethra exists to a greater extent than is commonly supposed. As the condition is one which is in most cases remediable, it is only necessary to call attention to it as not an uncommon source of infertility.

The author alludes also to a case in which he had reason to conclude that sterility was consequent upon inflammation and abscesses near the prostate gland, occasioning obliteration of the ejaculatory canals.

Two important and delicate questions arise out of these inquiries. 1. Whether a man who has the inclination and power to copulate, but who is nevertheless sterile, is justified in contracting marriage. 2. Whether this condition is a sufficient ground for divorce.

That a man who is unable to fulfil the command, "to be fruitful and multiply," is right in disappointing the hopes and perilling the happiness and perhaps health of a woman, cannot, the author thinks, be maintained by any casuist, and in some of the cases related in the paper he has felt it his duty to give advice in accordance with this opinion.

It cannot be doubted that in women ready for conception, frequent sexual excitement without impregnation is very likely to prove injurious to health, and the author shows from the writings of Dr. West that diseases of the ovaries and uterus originate from this cause.

The second question is one upon which a surgeon is scarcely called upon to pronounce an opinion. But the author ventures to remark that as sterility in women is not considered an adequate cause for divorce, so the man ought not to pay such a penalty for unsuspected unfruitfulness.

The President then related several cases bearing on the paper. A gentleman, aged 34, had been married eight years to a healthy wife. He had strong sexual desire, and frequent intercourse, with abundant emission, but no family. He died of tumor in the groin, which was found after death to have been due to encephaloid disease of a retained testis. The other testis, which was also retained, was of the natural size, but did not contain any spermatozoa. Unfortu-

nately the disease had extended to the bladder, so that the condition of the vesiculæ seminales could not be made out. In a second case, not under his (the President's) observation, a gentleman whose testes were retained, and who had frequent intercourse with his wife, ejaculated a transparent fluid, but it did not contain spermatozoa. A gentleman, 34 years of age, whose testes were undescended, had frequent sexual intercourse and free emissions, but the fluid, which was examined four times, did not contain spermatozoa. This gentleman was desirous of knowing if he ought to get married. The President told him that if he did he would have no children. In a fourth case, one testis was misplaced in the perinæum, the other was normal. He (the President) tried by an operation to bring it to its natural position, but did not succeed. He subsequently removed it. It did not contain any spermatozoa.

Dr. Webster said the subject discussed by the author of the paper just read was of much interest, and he believed with him that sterility oftener depended upon males than females. In support of such an opinion, he would refer to nearly 300 married men within his own acquaintance who, during their matrimonial state, never begot any offspring, excepting one instance, where a child was born after the mother had remained barren during fifteen years. In the list kept by Dr. Webster no person was entered until the parties had lived together for at least five years; and, although he never investigated the matter so scientifically as Mr. Curling, there appeared little doubt the fault mainly depended upon the male, since various females who continued childless throughout their first marriage, on contracting a second became mothers; whereas there only occurred, in reference to the opposite sex, the solitary example already mentioned. It might, however, be added as curious that a large proportion of the sterile individuals Dr. Webster had thus recorded were medical practitioners; and, moreover, what seemed also rather singular, seven of these couples lived in a thoroughfare having the same designation, but with different numbers on their respective residences. Regarding the chief cause of barrenness in the various illustrations to which Dr. Webster referred as coming under his immediate observation, none having been patients, it was impossible to speak definitively; nevertheless, as analogous cases are not uncommon, the inquiry mooted by Mr. Curling was important, both medically and in its social relations, besides bearing specially on questions of jurisprudence.

Mr. Wyatt asked if any of the gentlemen Dr. Webster spoke of had suffered from spermatorrhœa in youth.

Mr. Acton was pleased to think that the subject of sterility had been brought before the Society, thus proving that the affections of the reproductive organs were at length occupying that professional attention which their importance demanded; and he hoped that their treatment would never be again tacitly given up to quacks,

but pass into the legitimate domain of science. In the presence, then, of this professional neglect, it was not surprising to find so much public ignorance existing on the subject of the paper—a subject, it must admitted, still requiring much original investigation. He (Mr. Acton) was indisposed to allow that only three causes of sterility existed. The following was not of uncommon occurrence. A young entire horse, who has been a sure foal-getter, has, say, forty-five mares put to him; none of these mares become strutted (as it is called). Here was sterility on a large scale, and opened a wide field for inquiry as to whether the cause was obesity or sexual exhaustion from previous seasons' covering—causes which he had fully dwelt on elsewhere as commonly influencing sterility both in man and beast. It might, then, be consolatory for the medical husbands alluded to as having no family to know that the profession did not consider that they must necessarily suffer from undescended testes or epididymitis—the result of old gonorrhœas. After all his experience, he (Mr. Acton) was disposed to think that the childlessness of many women did not depend upon the fault of the husbands, but upon the fact that some of the canals appertaining to their own reproductive organs were blocked up either temporarily or permanently. Practically, it was found that too often the opinion of the profession was not asked by patients before marriage. The saddest cases met with in daily practice were those of previously strictly continent men, who married, and then learnt for the first time that they were incompetent to their marital duties; it was then that the medical man was first called in, and his opinion asked as to the cause of sterility. The answer was not such an easy one as had been assumed. The reason arose from many social causes, which could not be given on the present occasion. If it was truly stated that modern accoucheurs were of opinion “that frequent sexual excitement without impregnation was likely to prove injurious to healthy women,” he must join issue with them. That the modern civilized lady was very subject to uterine or ovarian disease he would admit; but to attribute these ailments to such a cause as that above alluded to was not founded on observation, seeing that so many single young women were as great if not greater sufferers than the married, though sterile. He must likewise raise his voice against the assertion that epididymitis was a frequent cause of sterility, seeing the number of instances of young men who had been affected with this ailment who afterwards had a family. In treating of the causes of sterility, he would assert that the prognosis was not so unfavorable as had been stated. The Fellows of the Society must be aware of numberless instances of temporary sterility yielding to proper remedies, thus proving that the affection did not depend alone upon mechanical impediments to impregnation, but, like its kindred condition, impotence, was a frequently remediable affection.

Mr. Fergusson said he was disappointed that in a paper by a gentleman of so great experience as Mr. Curling, so little evidence could be brought forward on the subject. He then referred to malposition of the testes as a cause of impotency, but it had long been known that where the genital organs were imperfectly developed, the great probability would be that the sexual vigor would also be imperfect. He should like to have heard more evidence brought forward as to the condition of the ejaculatory tubes in cases of this kind. He (Mr. Fergusson) then went on to speak of the effect of inflammation of the ejaculatory tubes interfering with sexual power. He also alluded to the fact that sometimes, though rarely, they were injured in the operation of lithotomy, and related an instance in which a gentleman, seventy years of age, complained seriously of loss of sexual power after the operation; and another instance of the same defect in a younger patient. He said that although both testes might be affected by orchitis, generally only one was attacked, and the absence of one testis had very little to do with sexual vigor. In reference to Dr. Webster's statement, he said that he (Mr. Fergusson) knew a lady of most perfect development, who had had two children, and then became a widow. She then married a widower who had also had two children by his first wife, but this second marriage was not fruitful. Mr. Curling had also omitted to ascertain the exact time when the fluid examined had been emitted.

Mr. Curling had heard that the President was in possession of some facts bearing on the points in his paper, and had applied for this information some weeks ago, in order that his communication might be rendered more complete, and he regretted to state that the President was not disposed to assist his inquiries, and did not reply to his application. He had, however, included in a table one of the cases which had been mentioned, and which had already been communicated to the Pathological Society. With regard to Dr. Webster's remark, that sterility was more common in men than in women, he could express no opinion, for there were no data to enable him to form one. He had little to say in reply to the observations which had fallen from Mr. Fergusson and Mr. Acton. Mr. Fergusson had missed altogether the real point of the paper, which was on sterility, and not on impotency. Mr. Fergusson mentioned that we were well acquainted with the fact that persons with small, undescended testicles were impotent; but there was nothing new in that. But in the cases which he (Mr. Curling) had brought forward in his paper, the subjects of this infirmity were not impotent; they were only sterile. He had listened attentively to Mr. Fergusson's lengthened remarks, and could discover nothing which bore, in any way, on the paper, which had evidently not been understood by the speaker. He might also make the same remark in reference to the observations of Mr. Acton. He quite agreed that sterility after epididymitis was not common, because to produce

sterility the obstruction must exist on both sides. Mr. Acton doubted whether sexual excitement, without impregnation, produced any injurious influence on the health of the woman. Mr. Curling had the authority of Dr. Tyler Smith and Dr. Priestley, as well as of Dr. West, from whose work he had quoted, for saying that diseases of the ovaries and uterus originate from this cause. Mr. Curling had not laid claim to originality, but from a large experience he had been able to produce some important facts bearing upon a delicate subject, at present involved in obscurity, and respecting which it was extremely difficult to obtain reliable information.—*Proceedings of the Royal Med. and Chirurg. Society, June 23d, 1863, in the London Lancet.*

CLINICAL OBSERVATIONS ON THE EFFECTS OF DIET AND DRUGS IN THE TREATMENT OF TWO CASES OF DIABETES MELLITUS,

CONDUCTED AT THE ROYAL INFIRMARY, EDINBURGH, UNDER DR. LAYCOCK, BY DR.
ANDREW SMART, CLINICAL CLERK.

THE two diabetic cases here referred to have been under observation for a period of six months, but the following results do not include more than ten weeks.

First series of observations were instituted with the object of determining the sugar-producing agency of certain articles of diet. They were conducted simultaneously on the two patients, both of whom, during the course of the researches, were placed in as nearly as possible similar conditions, and all sources of fallacy were carefully avoided. The substance to be tested was given to both patients in like amount at the same periods of the day; and the analyses of both urines were made repeatedly during the course of each trial. No trial was considered complete which was not confirmed in both cases; and the time allowed to conclude any observation was seldom under forty-eight hours, but it more generally extended over a period of several days.

In all cases, it was considered necessary, for the sake of accuracy, to note other characters of the urine besides its merely saccharine condition; and the amount of the urea with that of the sugar was in nearly every instance carefully determined. Besides these precautions, the amount of urine was accurately measured. The exact quantity of solid aliment (exclusive of its water) partaken by the patients was ascertained by weight—the proportion of water contained in the solid as well as fluid articles of food being previously estimated, deducted, and added to the fluid column. The total quantity of fluids taken was, in like manner, exactly ascertained. The weights of the alvine excretions were known, and the patients were weighed from time to time.

The following articles are arranged in the order in which they

were found to act as sugar-producers. The exact ratio of saccharine elimination produced by each has been ascertained and recorded, but general results only here are indicated.

1. *Sugar* (cane), whether used as an article of diet or medication, besides undergoing transformation into grape sugar, acted as a powerful diuretic and stimulant to the morbid production of sugar. It also greatly increased thirst.

2. *Rice*, contrary to general belief, was next to sugar in its influence on the production of diabetic sugar and increase of urine. Its action in these respects was much greater than can be explained by reference to the proportion of starch and sugar which it contains.

3. *Potatoes* were inferior to rice in their sugar and urine-producing powers, but exerted a markedly greater influence than the ordinary sorts of wheaten bread.

4. *Gluten Bread*.—We have not succeeded in ascertaining the exact composition of the bread usually sold under this name. It is decidedly sweet to the taste (but this saccharine quality does not depend on admixture with sugar). It is also very palatable, and preferred by diabetic patients to ordinary bread. It has been much recommended in diabetes, under the belief that, as an article of food, it operated more mildly in exciting and maintaining morbid action. This opinion was contra-indicated by repeated and careful trials, the results of which demonstrate that its influence as a sugar eliminator exceeds that of ordinary white and bran bread.

5. *White Bread*.—The trials with this bread, as with the others, were extremely varied, but invariably with like results. It undoubtedly produced less sugar than gluten bread, but was superior in that respect to brown bread and oat meal. It is interesting to know that the amount of sugar found in the urine invariably maintained a fixed relation to the combined proportions of sugar and starch contained in the bread, the proportion of diabetic sugar always exceeding that of the starch and sugar elements as two to one. Thus, for example, if the amount of bread taken in twenty-four hours contained, say 500 grains of combined sugar and starch, and no other substance interfered with the experiment, a careful analysis of the urine during the same period yielded, with remarkable uniformity, nearly double that amount, *i. e.*, somewhere about 1000 grains.

6. *Bran Bread*.—This bread differed in no important particular except in its milder action in the production of sugar. But this difference was trivial.

7. *Oatmeal*.—The influence of this cereal, when given weight for weight with the others, was so decidedly less that there can be no doubt in placing it last in the list now given. It diminished the amount of urine while rather heightening its density, but, as an article of diet, it was not relished by the patients.

8. *Eggs*.—When the patients were put on an exclusively egg

diet, the amount of urine and sugar progressively diminished, and the latter would probably have entirely disappeared from the urine had it been possible so to restrict the diet for a sufficiently lengthened period.

9. *New Milk*.—Contains sugar as sugar of milk; but, judging from all the trials which were made with it, we were led to infer that this constituent does not undergo glucose transformation. Under this, as in egg diet, the sugar progressively disappeared from the urine. But the great difficulty always experienced was, to confine the patients for some time to one or two kinds of food.

10. *Animal Diet*.—When eggs, milk, fish, beef, mutton, and all other kinds of animal diet, were given either alone or in combination, the following results invariably followed:—1. Marked decrease in the elimination of sugar and secretion of urine, which was progressive with the continuance of the diet. 2. Sense of hunger and thirst greatly lessened. 3. Increased density of urine.

11. *Vegetables*.—Such as cabbages and turnips, sensibly augmented the production of sugar, but to a much smaller amount than is generally supposed. They were also apt to derange the digestive system. Cabbage invariably produced diarrhoea in one of the patients, and in the other indigestion and flatus.

12. *Cod-liver Oil and Fats*.—Their use was followed by the same results as were found in the animal diet trials; but they could not be taken by the patients for some time, or in considerable quantity, without inducing nausea.

13. *Mixed Diet*.—The production of sugar under this diet, of whatever substances it may be composed, was found to be invariably proportional to the amount of sugar and starch contained in the articles which were used.*

II. *Second Series of Trials to determine the Influence of Remedies on the Elimination of Diabetic Sugar.*

1. *Potassium Permanganate*.—Allayed thirst, lowered the density, but increased the amount of the urine and also of the sugar.

2. *Sesquinitrate of Iron*.—Stimulated appetite for food; did not allay thirst; did not materially influence the amount of urine, but increased that of the sugar.

3. *Glycerine*.—Markedly increased thirst and the amount of urine; lowered density of urine, but total amount of sugar greatly increased.

4. *Chloroform*.—This was exhibited by inhalation, which was repeated every two hours during the experiment. Quantity of urine greatly increased; its density lowered, but total amount of sugar in twenty-four hours increased. Chloroform increases sugar simply by acting as a diuretic.

* *Porter and Ale*.—It is generally supposed that all malt liquors very powerfully stimulate to the morbid production of sugar in diabetes mellitus; but the experiments made with ale and porter do not support that opinion. Their use, to the extent of twelve or twenty-four ounces daily, is attended with little more than an appreciable increase in the amount of sugar. The rate of increase, as in the other articles, was ascertained and recorded.

5. *Sulphuric and Chloric Ethers*.—Both these agents operate as chloroform, but in a much less marked degree.

6. *Strychnia*.—The experiments with this powerful agent were begun by administering one-fortieth of a grain thrice daily, and the dose progressively increased until its physiological action on the nervous system became incipiently apparent.

The result was a progressive and commensurate decrease in the amount of urine and sugar. The patients' diet during the course of this and the other trials of remedies was uniform. The patients' general health was good, and they gained weight.—*Medical Times and Gazette*.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 27th.—Dr. JACKSON reported by permission the following cases that had occurred in the practice of Dr. Benj. Cushing, of Dorchester; the dissections were made by Dr. J.

I. *Very extensive Arachnitis, connected with Disease of the Temporal Bone*.—The patient, a young man 19 years of age, of delicate health, had had otorrhœa upon the right side from his childhood until about five years before his death, when it ceased, on the occurrence of an abscess near the right temple. His fatal sickness lasted about four weeks. During the last fifteen days he was attended by Dr. C., and was confined to his bed, though during the previous week he had been out. Pains in the head and small of the back were throughout very severe, but without any marked affection of the special senses. An abscess formed behind the right ear, as one of the first symptoms—was opened, and healed. Soon afterwards, a second abscess formed, just above the first, which opened of itself, and never closed; a probe could be passed about extensively in various directions beneath the skin, and also within the substance of the bone to some extent. During the last week hemiplegia came on, upon the right side, and became complete: but, two days before death, an abscess was discovered upon the top of the head, was opened, discharged about two ounces of pus, and from that time he regained the power of motion; a most remarkable pathological fact, considering the state in which the membranes of the brain must have been. There was no discharge from the right ear, nor any more pain there than over the head generally. Deafness, of course, had been complete for years. The fever was moderate; pulse during the last two weeks about 100, and during the last few days it became more full. Once there was a general convulsion. One of the most striking facts in the case was, that the mind was perfectly sound until the last two days, when he had complete stupor. There was no appetite, but the irritability of the stomach that belongs to meningitis was wanting.

On dissection, the whole cerebral arachnoid was so thickly covered with a dead-opaque, and somewhat pasty lymph, that the convolutions were scarcely visible, except at the base, and about the cerebellum,

where there was but little effusion. It was evidently of considerable duration, as it could nowhere be scraped off entirely from the serous membrane. A most interesting anatomical fact was the limitation of the disease to the arachnoid membrane; the pia mater, where it dips down between the convolutions, showing nowhere a trace of lymph nor of serous effusion, nor was it even congested. The ventricles contained very little more than the usual amount of serum, and the brain was quite healthy. In the place of the internal ear was a cavity, four or five lines in diameter, filled with a rather firm, and probably old, curdy substance; and not far from this was a ragged opening, two lines in diameter, directly through the bone. The venous sinus adjoining the temporal bone was filled to some extent with old fibrin, and the whole top of the head was the seat of an abscess that burrowed between the scalp and the bone, and by which this last was extensively denuded. Organs of thorax and abdomen sufficiently healthy.

II. *Very extensive and latent Disease of the Aortal Valves.*—The patient was a gentleman, 57 years of age, who resided about three miles from the city, but came in daily, as he had a place in the Post Office. He was rather pale, but otherwise a healthy-looking man, and active in his habits. Neither his wife, nor his brother with whom he lived, knew anything of his having any cardiac symptoms, and Dr. J., who had often met him and conversed with him during the last two years, never suspected the disease. For about ten days before his death he had complained of feeling weak, and of some uneasiness about the epigastrium, but without any marked local symptom, and Dr. Cushing having questioned him in regard to dyspnœa and palpitation, he said that he had had none. He had been into town every day, so far as Dr. C. knew, to attend to his business, until last Friday, the 24th, and he expected to go in the next day. About 10, P.M., he went up to bed, when he soon complained of cough and dyspnœa, and in about ten minutes he died.

The disease of the valve was extensive in regard to the amount of ossification, the rigidity, and the narrowness of the passage for the blood. The parietes and cavities of the heart were but little affected; and the other organs generally were healthy.

Bibliographical Notices.

A Practical Treatise on the Diseases of the Heart and great Vessels, including the Principles of Physical Diagnosis. By WALTER HAYLE WALSH, M.D., Fellow of the Royal College of Physicians, &c. &c. A new American from the third revised and much enlarged London Edition. Philadelphia: Blanchard & Lea. 8vo. Pp. 420.

THE standard work of Dr. Walshe on Diseases of the Heart is already too well known to require any extended notice at our hands. It would naturally be expected, embodying as it does, the results of accurate and careful observation by one of the most accomplished medical scholars of the time, that each succeeding edition would contain important additions and modifications, and we are not unprepared for the increase of valuable matter in the edition just published. Be-

sides numerous facts and discussions, more or less new, in the description of the principles of physical diagnosis, considerable additions have been made in the practical portions of the book, relating to affections of which little or no notice had been taken in the previous editions, including more particularly functional diseases of the heart. The chapters on this subject are peculiarly clear and instructive. The following original and philosophical views upon the nature of *angina pectoris*, are quoted from page 163. As will be seen, Dr. W. regards this painful affection as for the most part due rather to a paralytic condition, than, as many writers assume, to spasmodic action.

"For my own part, I regard the presence of spasm either initiative or sequential, either simple or with cramp, as altogether doubtful in the ordinary class of cases. In the first place, it appears to me incontestable that anginal suffering, and in a well developed form, may exist without spasm. For how is it possible that a heart spasmodically contracted can act rhythmically, as all good observers admit the organ habitually does where no *organic* disease, of necessity influencing the healthful measure of the pulse, co-exists? And if the seizure may thus be pushed to the imminence of death without spasm, it seems unlikely the mode of action should change just at the moment of the fatal syncope.

"I cannot help believing it most probable that the pain, when it gravely affects the motor innervation, does so paralytically; that the death is one of suspended, and not perversely excited, contraction. When the pulse does suffer change, its dominant condition is increasing weakness; besides, in the few cases I have opened, the heart bore no marks of recent spasm—it was flaccid and yielding. And, further, who ever meets with genuine angina in the possessor of a strong, purely hypertrophous heart?

"But while holding, on these grounds, very firmly to the doctrine of paralysis, as the perverted motor state in ordinary angina, I am not prepared to affirm there may not be exceptional cases, in which simple spasm, or spasm with dislocation, or rupture of fibre (true cramp), really occurs. I would suggest at least that in these rare instances, where intense tetanic spasm invades the external muscles, an analogous state of the heart may be the real cause of its stoppage; but I should not, even so, be disposed with Dr. Latham to look on the pain as the effect of the spasm, but to view the spasm as the reflex disordered motor result of the pain."

We would also invite particular attention to the chapter upon alterations of nutrition, and especially to that portion of it that treats of fatty metamorphosis of the heart as being worthy a careful perusal.

We have not space to enter into any enlarged analysis of the work before us. It will be sufficient to say that in the various and varied affections of which it treats, the author is always clear and concise, and no one can turn over its pages without receiving much sound practical instruction.

The volume is in the usual good taste of the publishers, to whom the profession is already so largely indebted.

A number of Surgeons and Assistant-Surgeons are required for the regiments of U. S. Colored Troops. The pay is the same as that of other regimental medical officers—Surgeons, \$163.00, and Assistant-Surgeons, \$112.83 per month. Application should be made to the Surgeon-General, U. S. A., at Washington, D. C., for permission to come before the Board of Examination. The general principles of examination are the same as those observed in the examination of Assistant-Surgeons of Volunteers.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, SEPTEMBER 17, 1863.

PHARMACOPŒIA OF THE UNITED STATES.—After a long delay the new Pharmacopœia has appeared. It was in May, 1860, that the National Convention was held at Washington for the purpose of preparing the fourth decennial revision of this work. The gentlemen then assembled, who represented the various State Medical Societies, the incorporated medical colleges, the colleges of physicians and surgeons and the colleges of pharmacy, appointed a committee of nine members to which was referred all communications, and which was authorized to take all measures that might be necessary for the revision and publication of the work. It consisted of the following gentlemen:—Dr. George B. Wood of Philadelphia, President of the Convention, Dr. Franklin Bache of Philadelphia, Dr. Edward R. Squibb of New York, Mr. Charles T. Carney of Boston, Dr. Henry T. Cummings of Portland, Mr. William Procter, Jr., of Philadelphia, Dr. Joseph Carson of Philadelphia, Mr. William S. Thompson of Baltimore, and Mr. Alfred B. Taylor of Philadelphia. During the three years which have passed since its appointment, the committee has held regular weekly meetings in Philadelphia, and has accomplished a large amount of labor in examining the materials which had collected during ten years, and in proving the many new processes which have been substituted for those recommended in the previous revision. A large part of this work was done by sub-committees, to whom special subjects for investigation were referred, and who made 138 written reports of their labors. The high character which one of the most active members of the committee bears as a successful pharmacist and manufacturing chemist should be a sufficient guaranty for the faithfulness with which this important work has been done. Dr. Squibb, in a report to the New York State Medical Society in February last, says, in relation to the impatient spirit which has been exhibited at the length of time required for its preparation:—"There has been much complaint from various quarters, of the delay, or the slowness which has attended this work, because few appear to have any adequate idea of the time, labor and responsibility involved in such an undertaking; and it is not encouraging to those who have now been earnestly, arduously and gratuitously engaged in it for nearly three years, to be requited by what they believe to be undeserved complaints and animadversions." He states, also, that he intends to offer at the next annual meeting of the Society "a concise practical review of the new Pharmacopœia, dwelling principally upon the character and uses of its new remedies, its nomenclature, and the changes introduced, and earnestly asking for its general adoption as an uniform rule of faith and practice throughout the profession."

It is not our purpose to attempt at this time a critical review of so important a work; we desire merely to call the attention of the profession to its publication, and to mention some of the modifications which have been made in the present edition.

To avoid all confusion, which is constantly arising from the use of the pound avoirdupois and troy, the committee has omitted the word "pound" throughout the book, and has in every instance expressed the desired weights by the term "troyounce," which cannot be mistaken for the ounce avoirdupois, and in grains. For the heavier, the oleaginous and the corrosive liquids the quantities are hereafter to be estimated by weight instead of by measure, a custom which is employed with nearly all liquids by the dispensing druggist upon the continent of Europe, and which should be borne in mind by those who copy foreign recipes. The process of percolation or displacement has been almost universally and most wisely substituted for that of maceration for the extraction of the soluble parts of drugs in the preparation of tinctures, extracts, &c. The list of the *Materia Medica* has suffered the usual changes of time. Twenty-six old members have been discarded, and fifty-five new medicines have been honored by an official recognition. As for the former we shall never miss them, while many of the latter have proved themselves, even upon a short acquaintance, of great value. The preparations have been increased by one hundred and eleven additions, while thirty-seven only have been omitted. Both numbers might, we think, have been increased with advantage, for there are very many foreign preparations which we might adopt greatly for our own benefit, and several which still retain their place in the *Pharmacopœia* are of no use whatever. A few changes have been made in nomenclature occasioned by the transposition of certain preparations from one class to another, and by the substitution of correct terminations in accordance with good Latin and advanced chemistry. Finally, a very important addition to the book, and one which we can all study with advantage, is a full index, so accentuated as to serve as a pronouncing vocabulary.

The work is published by Lippincott & Co., in large, clear type, upon good paper, and in order to bring it within the reach of every physician it has been issued at the low price of one dollar.

HOMO SUM, ET HUMANI NIHIL A ME ALIENUM PUTO.—The King of Dahomey certainly could not have been dreamed of by the philanthropist who gave us this beautiful sentiment, as the following letter in relation to the monster, lately written to the Duke of Wellington by M. Jules Gerard, the celebrated lion-hunter, will show:—

"Monsieur le Duc,—Your Grace is well aware that few men gain by being seen close, unless they are men of intellect and merit. The King of Dahomey, despite his cognomen, which signifies the 'Eternal,' or the 'Infinite,' fully justifies that rule, to which he is no exception. Physically he is similar to the other blacks of his country, tall, well built, with a head like a bull-dog. The most usual expression of his countenance is that of cunning and cruelty. His moral qualities are in perfect keeping with his physical conformation. He is more gracious than the kings who have preceded him, and fanatical for old traditions and customs. The traditions of that microscopic court are, to turn the whites to the best possible account, but especially to induce them to make presents. It is the custom to excite the people with sanguinary spectacles, so as to be able to carry off the neighboring population when a slave-dealer makes an offer to the King, and also at the annual custom of human sacrifices.

"I have just spent twenty days at Kana, where the King was staying for the celebration of the lesser ceremonies. On the day of my presentation I was conducted across the market-place, where twelve corpses were exposed to view on

separate sites. Six were hung up by the feet, the six others were upright, like men about to walk. Those whom I saw close were horribly mutilated, and not beheaded. An enormous pool of blood covered the ground beneath the scaffold, giving unmistakable evidence of previous sacrifices and of the tortures which accompanied them. Our reception by the King was brilliant, very cordial for myself as well as for the French Consul; but we were soon able to convince ourselves that this was but a comedy always performed by this poor Paladin to get the presents brought by the whites. Born and brought up in the midst of these spectacles, which would be ridiculous if they were not horrible, the present King is actually more fond of them than his subjects. I saw him on that day admiring, with the delight of a child, the grotesque dances and ridiculous pantomime of his Ministers, and then of the Princes, and then of all present, for our amusement. A most infernal music, which nearly deafened us, delighted the King, who seemed to be in a state of ecstasy; and this, M. le Duc, lasted for six hours. On the following day his Majesty invited us to witness a procession of the King's riches. On reaching the square of the palace (reed huts), an agreeable surprise had been prepared for us. The entrance-gate was flooded by a pool of blood, two yards in width, and on each side a column of recently decapitated heads formed two immense chaplets. It is true that on this day the King wore the emblem of Christ on his breast. It must be presumed that it was the cross of execution that he meant to imply by this ornament. As regards the procession of his wealth, it consisted of a few old carriages and bath chairs, carried by men with figures like Polichinello. One thousand women carried each a bottle of liquor on her head; a brass basin, in the shape of a foot-bath, to receive the blood of the human victims on the day of the King's banquet; an image of the Virgin; various baskets, full of human skulls; an image of St. Lawrence, as large as life, carried by blacks; finally, the drum of death.

"At another festival the King commanded on foot his Amazons, who manœuvred with the precision of a flock of sheep. On the market-place already mentioned each step was ornamented by a dead body; and the King came and went in the midst of pools of blood and fragments of human flesh in a state of putrefaction. On this occasion he had daubed his face with coal. The ceremony terminated by a mad dance, in which the King took part, dancing *vis-a-vis* to drunken soldiers and musicians. Such are, M. le Duc, the man, the government, and the people whom we have hitherto hoped to turn into a path less contrary to the laws of humanity. I regret that Captain Burton should have arrived at Kana just at the moment of the King's departure, as he might have been enabled to see and judge of all these things.

"On the day of his departure the King invited us to a review of his army prepared for war. It was from 12,000 to 14,000 strong, comprising 12,000 Amazons, 1,000 men of the body-guard, and 2,000 archers. I am, &c., JULES GERARD."

ARTIFICIAL EYES.—The history of artificial eyes brings us back to an epoch long anterior to the Christian era. In proof of this we have the painted pieces which are seen placed between the eyelids of a great number of Egyptian mummies. In our museums of antiquities are also to be seen some statues with silver, and others with gold enameled eyes. In spite of its antiquity, the art of making artificial eyes has made but slow progress, since we still find that in the sixteenth century prothesis was only applied to maintaining, in front of the closed eyelids, a metallic plate on which was painted an eye surrounded by its membranous veils. These plates were fastened on by a string which surrounded the head. This description of eye seems to have disappeared very slowly, as one of our contemporary authors, Rognetta, mentions having seen an invalid who still wore one of these eyes (*ecblepharos*). "I admit," adds he, "that I prefer a hundred times a simple black bandage to such a clumsy placard." The figure

represented in the work of Ambrose Paré appears to offer us an example of this (*ecblepharos*).

One sees, in the same chapter of this author, the representation of a plate made of enamelled gold, of the color of the natural eye, intended to be placed under the eyelids (*hypoblepharos*); but whatever might be the skill of the painter, his pencil could not depict the fulness or curve of the cornea. Add to this that these plates must be immovable, on account of their having no connection with the subjacent ocular stump, and we may rest assured that these eyes were in themselves deformities.

If one reflects, besides, on the representation which is given us of these pieces, we may well be doubtful of their utility. The acuteness of the internal angle of the artificial eye cannot fail to wound the *caruncula lachrymalis*, and the similar disposition of the external angle must interfere with the maintenance of the piece in the orbital cavity, and allow it to slip from between the eyelids.

Later on they attempted to give these metallic plates the form of a shell, better adapted to the configuration of the cavity destined to receive it; but all these experiments, however ingenious they may have been, failed to produce any practical result. The gold plate, prepared to receive the layer of enamel, always gave these artificial eyes a considerable weight, so that these pieces soon caused inflammation of the tissues on which they rested.

At length, the first trial in making enamel eyes took place; but, for a long time these were only used for ornamenting the heads of dolls and marionnettes—afterwards, for animals intended for natural history collections.

The development of the manufacture of artificial eyes at last produced pure enamel shells, extremely light, and to which were given the exact form of the human eye—that is to say, they had a projecting cornea. This was a real and considerable progress which should enable prosthesis henceforth to answer to the requirements of practice, the rest being necessarily the result of experience—the work of time.

And now, the makers of artificial eyes have succeeded in imitating the transparent cornea, the anterior chamber, the radiating form of the iris, the pupil, the sclerotic, and the vessels of the conjunctiva, with such a degree of perfection that it is often difficult, not to say impossible, to distinguish the fictitious eye from the natural one.

If we add, with these improvements, the clever artists who devote themselves to this specialty, contrive, by ingenious sections at the edges of the shells, to adapt them to all the irregularities of the surface of the lost eye, so as to take advantage of the mobility of the stump in order to establish complete harmony between both eyes, we can imagine to what a degree of perfection the art may attain.

I have frequently witnessed the following occurrence:—When a patient, wearing an artificial eye, presents himself at the clinique of M. Sichell, this clever ophthalmologist requests one of the pupils who attends his class to make a diagnosis of the affection from which he suffers. After an attentive and minute examination of the eyes, the young student reports an immobility of the pupil of one eye, and, sometimes, a more or less increased density of the globe—never have I seen the existence of a prothetic piece recognized—and great, inva-

riably, has been his surprise on being told that the eye, on the disease of which he had been discoursing, was an enamel one.

The various figures which we publish explain, by the numerous and diversified forms of the edges of the shells, how the application of an artificial eye no longer requires a previous operation; and the use of enamels, which resist for a greater length of time the dissolving action of the humors of the orbital cavity, each day lessens the great misfortune of losing an eye.

Thus, in the treatise of Hazard Mirault, published in 1818, we see that this artist recommended the artificial piece to be changed every six months at least, whilst M. Boissonneau, in the paper which he read at the Ophthalmological Congress of Brussels, mentions a period of double that duration:—"The polish of the artificial shell lasts," he says, "for more than a year; and at the end of that time they have merely lost their brilliancy, without ever becoming uneven on the surface."—*Dublin Quarterly Journal of Med. Science.*

VITAL STATISTICS OF THE AFRICAN RACE.—The following series of questions, which are particularly directed to the medical profession, have been issued by the Commission appointed to inquire into the condition of the colored population emancipated by the President's proclamation and by acts of Congress:—

"1. What is the number of the colored population of your town? 2. About how many pure blacks? 3. About how many mulattoes? 4. Does the colored population, if not recruited by immigration, increase or decrease? 5. Do mulattoes seem to you to have as much vital force to resist disease and destructive agencies as pure blacks, and as whites; and do they usually live as long? 6. To what diseases do mulattoes seem peculiarly liable? 7. Do mulatto families usually have as many children as white families? 8. Can you give instances within your own knowledge, of the number of children in one family born of, and reared to maturity by mulatto parents? 9. Are the colored people generally industrious and self-supporting, or not? 10. How is it in the second generations with regard to the number and health of offspring? 11. Through how many generations has any family of mulattoes been known to persist? 12. Do the mulattoes seek public charity in greater or less proportion than whites? 13. Do you consider them, upon the whole, as valuable members of the community, or not?"

NATURE OF THE GASES IN HYDRO-PNEUMOTHORAX.—M.M. Ch. Leconte and Demarquay have prepared a memoir in relation to the gases in hydro-pneumothorax in man. After having produced traumatic emphysema in animals in order to study the changes which the air undergoes under these new conditions, they have determined that the air found in emphysema in man undergoes modifications entirely analogous to those which have been observed in animals.

The air extracted from the cellular tissue of an old man, in whom emphysema had been occasioned by a fracture of the ribs, presented the following composition:—

Oxygen,	-	-	-	-	-	-	6
Carbonic acid,	-	-	-	-	-	-	5
Nitrogen,	-	-	-	-	-	-	89

The same results have also been recently obtained in the case of a patient in the same condition, in which the air had undergone the same alteration. These facts illustrate in a striking manner:—

1st. The frequent complete harmlessness of extensive emphysemas, in consequence of the rapid absorption of nearly all the oxygen and of its replacement by a certain quantity of carbonic acid.

2d, and finally, the slowness of the absorption of the gases in emphysema, for we have demonstrated that of all the gases nitrogen, both in man and animals, most resists absorption.—*Journal de Chimie Médicale*.

ALTHOUGH the letter of Dr. Williams, published to-day, is dated at Utrecht, we are pleased to announce his return home from a visit of several months to the various medical schools of Europe. His letters to the JOURNAL have furnished instructive and interesting pictures of the study of ophthalmology abroad, and his return will be most welcome to his numerous friends and patients.

At the stated meeting of the Suffolk District Medical Society, held on Wednesday, the 16th inst., the names of the following gentlemen who have joined the Society since the annual meeting in April, were read:—Admitted by Censors, Dr. Alex. M. Wood; from other Societies, Dr. George B. Windship. Deceased since annual meeting, Drs. N. K. Gunn, John Stevens, David Roberts, James W. Stone, C. A. Davis.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 12th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	54	52	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	51.4	51.6	103.0
Average corrected to increased population	00	00	112.89
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pncumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
15	0	2	6	0	9	4	21

NOTICE.—It has again become necessary to notify subscribers and others that Mr. J. G. White, of Philadelphia, is not authorized to act as agent for this JOURNAL.

ERRATUM.—On page 124, of the last number of the JOURNAL, line twenty-third, for "time" read *him*.

MARRIED,—At Norwalk, Conn., J. W. McLean, M.D., to Miss Hattie L. Graman, both of Norwalk.

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 12th, 106. Males, 54—Females, 52.—Accident, 1—asthma, 1—inflammation of the bowels, 1—bronchitis, 1—cholera infantum, 21—consumption, 15—convulsions, 5—debility, 1—diarrhea, 7—diphtheria, 1—dropsy of the brain, 2—drowned, 1—dysentery, 9—scarlet fever, 2—typhoid fever, 4—gastritis, 1—disease of the heart, 3—strangulated hernia, 1—insanity, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 6—neuralgia of the stomach, 1—old age, 3—paralysis, 2—peritonitis, 1—premature birth, 1—scrofula, 1—suicide, 1—teething, 1—disease of the uterus, 1—unknown, 1—whooping cough, 1.

Under 5 years of age, 52—between 5 and 20 years, 8—between 20 and 40 years, 15—between 40 and 60 years, 16—above 60 years, 15. Born in the United States, 76—Ireland, 22—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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No. 8.

GUN-SHOT WOUNDS, FROM ARKANSAS POST.

[Communicated for the Boston Medical and Surgical Journal.]

{ UNITED STATES GENERAL HOSPITAL No. 3,
MEMPHIS, TENN., April 12, 1863.

MESSRS. EDITORS,—In my last communication to your JOURNAL, which was from the United States General Hospital at Hilton Head, S. C., I stated that it was my intention shortly to leave that place and return to the North. Soon afterwards, with another surgeon, I was placed in charge of one hundred and twenty sick and wounded soldiers, who were to be landed in New York, and that duty having been discharged, I was directed to report to the Surgeon-General in Washington City.

HOSPITAL No. 3, MEMPHIS, TENNESSEE. •

When I arrived in Washington City, there was an expectation that an immediate collision would take place between the army of Gen. Grant and the rebels at Vicksburg. The demand, therefore, for surgeons within reach of that point was very urgent, and I was requested by the Surgeon-General to proceed without delay to St. Louis, and on my arrival there I was immediately directed to repair to Memphis, Tenn. I arrived at Memphis on the 21st day of January, 1863, and was assigned to Hospital No. 3, Adams Block, which had then just been opened for the reception of patients. Only a few patients had been admitted when I arrived there, but on the 23d of January, two days afterwards, about five hundred and fifty of the soldiers wounded at the battle of Arkansas Post were sent up the river in a steamer and admitted into this Hospital.

CONDITION OF THE WOUNDED.

It should be recollected that the battle of Arkansas Post took place on the 11th of January, and that the wounded in that battle did not arrive at the Hospital until the 23d, twelve days afterwards. The operations, therefore, were all *secondary*. Besides this, they had all been crowded on board a steamer while coming up the Missis-

issippi river, previous to their arrival, where their wounds could not receive that careful attention which their condition required. Though the mortality was not greater, nor even so great as might have been expected under the circumstances, yet it would doubtless have been much less if the patients could have been brought into the Hospital immediately after their injuries had been inflicted, and without the necessity of being transported several hundred miles in an overcrowded steamer.

When a large number of men have been wounded on the battlefield, there will of course be found a great variety amongst the injuries inflicted. The head, the trunk and the extremities, in this instance, had each contributed their usual proportion.

WOUNDS OF THE HEAD.

I.—John E. Smith, Co. F, 55th Ohio, was struck by a grape-shot on the left parietal bone, near the coronal suture, and about equidistant from the superior portion of the temporal bone and the sagittal suture, the wound being extended to near the central portion of the parietal bone. The soft parts having been divided and turned back so as perfectly to expose the bone, it was found to have been broken into several pieces, and the application of the trephine therefore was unnecessary. The fractured and depressed portions of the bone, both of the external and internal table, were carefully removed on the 29th of January, eighteen days after the injury had been inflicted. The dura mater was not ruptured. Though the patient had been, previously to this operation, frequently convulsed and comatose, immediately after the removal of the fractured and depressed pieces of bone both of these symptoms disappeared. For several days after the operation there seemed to be a fair prospect of the patient's recovery; but although he received the most careful attention, and every means was resorted to which could be thought of to keep down the inflammation, he fell into a comatose condition, and died on the tenth day after the operation.

The results of the operation of trephining, when other accidents render it necessary, are not very encouraging, but when the injury is produced by a gun-shot wound the prospect of a favorable termination is much diminished. In such cases the brain appears to have received a general shock in addition to the local injury.

II.—George Thompson, Co. F, 6th Missouri, was struck by a small, round shot, probably a pistol ball, which entered the supra-orbital ridge, over the right eye, about an eighth of an inch from the root of the nose. It passed outwards and slightly downwards, in a line directly towards the superior tip of the right ear. The ball fractured the orbital plate, and passed into the frontal sinus. The fracture could be felt by the probe as deep as the bottom of the orbit, beyond which it was not considered prudent to explore the course of the ball. The globe of the eye itself was disorganized and destroyed. For a considerable time the inflammation, as might have been expected, ran very high, and the pain was exceedingly severe. The swelling, however, after two or three weeks, gradually subsided to a considerable extent, and the disorganized eye-ball was finally reduced within the orbit.

The wound, however, frequently became very painful afterwards, and renewed treatment was often necessary for a day or two, for the removal of the pain and the recurrence of the general symptoms. The extirpation of the disorganized eye-ball became a question, and it appears to me that to have performed that operation would have been the best practice, as the ball which inflicted the wound, with some splinters of the fractured bone, would probably have been found about the bottom of the orbit, which might have been removed, and would have saved much of future danger and difficulty. The patient, though not cured, was able to travel, and he was discharged from the Hospital about the first of April.

III.—Cyrus Kroesen, Co. A, 77th Illinois, was struck by a round ball on the left side of the face, a little in front of the junction of the temporal and frontal bones. The ball then proceeded backwards, immediately above the base of the ear, making a track of about three inches in length beneath the scalp. The external appendages of the ear received no injury, but the hearing on that side was entirely destroyed. Though the ball must have passed in immediate contact with the bone, no exfoliation took place, and the wound healed without any dangerous symptom. The hearing on the right side was not at all affected, nor the eye-sight in the least disturbed.

IV.—Bryan McQuillan, Co. H, 83d Ohio, was struck by a Minié ball, which entered the side of the face, about half an inch below the corner of the angle of the mouth on the right side, and, passing backwards and upwards, went out directly in front of the inferior lobe of the right ear. The lobe of the ear was cut by the ball after it had passed out from the face. The ball, on its entrance, fractured the inferior maxillary bone, and knocked out two of the molar teeth. It also struck the ramus of that bone and fractured it, some loose pieces from that portion of the bone having been afterwards removed. The wound at first was very painful and greatly inflamed, but after a time the inflammation was reduced, and the pain and tumefaction to some extent subsided. The motion of the inferior maxillary, however, is entirely destroyed, as the articulation is completely ankylosed. The hearing of the ear, also, on that side, is entirely lost, and it is more than probable that both these organs will permanently remain in their present condition. The wound is nearly healed, but no improvement in the hearing nor increased action of the inferior maxillary has taken place.

V.—Wm. J. James, Co. F, 83d Ohio, was wounded by a Minié ball, which struck the left side of his head on the frontal bone, just at its most elevated portion, and, passing backwards a little to the left of the sagittal suture, in a direction towards the central portion of the parietal bone, went off at that point, laying bare the bone for the distance of about three inches. Though the bone was denuded of the integument it was not otherwise injured, and no abrasion, fracture or depression could be discovered. The eye-sight, immediately after the wound had been received, was greatly affected, so much so as almost to destroy vision, but in a short time it recovered to a considerable extent, and he has now much less of visual derangement than at first. About two weeks, however, after he received the injury he had a convulsion, and since that time, at intervals, two or three more. The imperfection and derangement of vision is not constantly the same, though

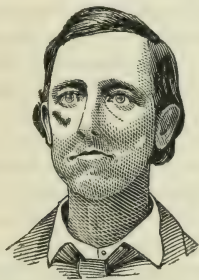
not at any time perfect. He finds them much worse when there is pain or uneasiness about the region of the wound. The right eye is more affected than the left. No exfoliation of the bone has taken place, and the wound has to some extent healed and looks healthy. The patient walks with a feeling of giddiness and insecurity. Though his general health is good, the symptoms of injury to the brain do not appear to be at all alleviated, and it is not easy to say what may finally be the result of this case.

VI.—John Anderson, Co. A, 77th Illinois, was wounded by a Minié ball, which struck him on the left side of the head, about the junction of the frontal and parietal bones. The wound extended from before backwards, a little to the right of the sagittal suture, and terminated very near to the lambdoidal suture. The parietal bone was denuded of its periosteum, and a slight portion of the outer table of the bone was removed for about 2½ inches by the grazing of the ball, but no appearance of fracture or depression could be discovered. The bone, however, along the track of the ball, after two or three weeks, began to exfoliate, and several small pieces of the external table were removed. The inner table was also soon after observed to be necrosed, and at the end of about a month after the wound had been inflicted, a part of the inner plate, about the size of a ten-cent piece, being found loose, was removed, exposing the pulsations of the brain very clearly. Afterwards, several other small pieces of the internal plate came away, having been removed as frequently as they were observed to become loose. The eye-sight was not observed to have been injured immediately after the wound was received, but in the course of two or three weeks from that time the patient said he observed that the sight of the left eye became, as he expressed it, feeble and glimmering, and when he attempted to read, the letters appeared to run into each other. At the end of three months, the wound has contracted to some extent, and appears to be healing, and will probably in time get well. The eye-sight, however, does not improve, and the patient thinks that the tendency is rather to grow worse than better. I think it very doubtful whether the sight of the eyes will ever be perfectly restored, even though the wound in the head should be entirely healed.

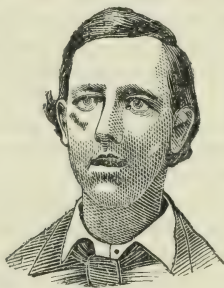
VII.—James W. Hudson, Co. B, 83d Ohio, was wounded by a Minié ball, which struck the left side of his face, just behind the lower angle of the malar bone, and, passing diagonally across the face, inclining a little upwards and inwards, struck the right malar bone at its upper portion, and slightly injured the anterior extremity of the zygomatic process of the temporal bone. The superior maxillary was fractured from the entrance to the exit of the ball, and the vomer was perforated. The palatine bones were not injured, the ball having passed a little above them. The orifice at the entrance of the ball was comparatively small, but that at the point of exit was larger, jagged, and much lacerated. At the place of exit the finger could be readily introduced, and the track of the ball behind the nasal bones and the perforation through the vomer could be distinctly felt. The lower portion of the superior maxillary bone being thus separated from the upper, and in such a condition as to forbid the expectation of uniting them again, it was determined to remove all the portion below the track of the ball.

I performed the operation by raising the upper lip, and dissecting

close to the bone, until the line of fracture was reached. After having thus separated the fleshy portion in front of the bone along the whole line of the fracture, the soft palate and palatine bones were carefully detached, on the inside of the mouth, from the posterior portion and sides of the lower fragment, and the operation thus completed without difficulty. Some of the short and projecting fragments of the remaining portion of the superior maxillary, and also of the right malar, were removed by the bone forceps, and the external wounds, which had not been enlarged during the operation, were dressed in the usual way. Very little blood was lost during the operation, and there was scarcely any trouble from hæmorrhage afterwards. The patient was not placed under the effects of chloroform, for fear he might be insensible to the blood reaching the trachea. He bore the operation, however, most heroically, and with such calmness and self-possession that he in no way interfered with the convenience of the operator. The operation was performed on the first day of February. The parts healed rapidly, and on the 12th day of March he was discharged from the Hospital, and returned to his home.



Without the Plate.



With the Plate.

When he left the Hospital, I advised him to have a plate made which would supply the place of that part of the superior maxillary and of the teeth which he had lost. I have since received from him two photographs, one of them showing his appearance before, and the other after the plate was applied. The copies from these will also enable the reader more perfectly to understand the description of the wound inflicted and the character of the operation performed.

WOUNDS OF THE TRUNK.

VIII.—David Atkinson, Co. G, 96th Ohio, was wounded by a Minié ball, which struck the left side, about two and a half inches below the nipple, and a little outside of a line drawn perpendicularly through it. The ball penetrated the thorax, between the eighth and ninth ribs, without injury to either of them. A gush of blood from the mouth immediately after the wound had been inflicted, indicated clearly that the lung had been perforated. The ball, however, did not pass through, and still remains somewhere within the cavity, and although there is a good deal of tenderness and soreness, there is nothing to indicate the exact present locality of the ball. Neither percussion nor auscultation throw any light upon it. There is considerable cough, also, but it is not now attended with bloody sputa. His general health is feeble, and he does not gain strength rapidly. The external wound was

entirely healed about the 20th of March, but he still remains in the Hospital on account of general debility.

IX.—Samuel Graves, Co. B, 7th Kansas, was wounded by a pistol ball, which struck him on the right side, an inch and three quarters directly above the nipple, and, passing through the body transversely backwards, with a slight inclination downwards, came out on the back, one inch and a half below the inferior angle of the right scapula. He states that there was a gush of blood from the mouth immediately after the wound had been received, which emanated, of course, from the perforated lung. He states, also, that the profuse bleeding soon ceased, though bloody sputa continued for a long time. The patient has naturally a feeble constitution, and does not gain strength rapidly. He does not now complain of pain, but only of a tightness of the thorax, which prevents him from taking a full inspiration. There is probably an adhesion of the lung, both at the anterior and posterior perforation. Both the external wounds have entirely healed. He had very little cough and no bloody sputa when he was discharged from the Hospital, about the first of April.

X.—John A. Cole, Co. A, 25th Iowa, was wounded by a large Minié ball, which struck the posterior superior spinous process of the ilium, just on the edge of the insertion of the gluteus maximus, and penetrated to the depth of an inch and a quarter, or a full inch into the substance of the bone. The ball was probably nearly spent, or it would have passed through the bone. It was removed soon after the injury had been inflicted, but the wound did not heal, and some loose pieces of bone could be detected by the probe. The odor from the wound also indicated that the bone was in a state of decay. This result is not surprising, as a Minié ball seldom fails to destroy the vitality of a bone where it strikes, and often for some distance around it. The necessity for the removal of the necrosed bone being evident, it was determined to cut down upon it through the original wound. I performed the operation on the 10th of April, just three months after the wound had been inflicted. The soft parts were found to be very much indurated, so much so as to give considerable resistance to the knife, but when these were cut through, several pieces of necrosed bone were found, some of them loose. Besides these, the bone was found to be necrosed for some distance round where the ball had struck. All the necrosed portions were carefully detached, and the walls of the cavity scraped clean. The cavity left in the ilium, after the removal of the diseased portions of the bone, was about the size and shape of half an egg cut longitudinally through its centre. The operation was attended by no untoward circumstance, and it is quite probable that the bone will now take on a healthy action, and that the patient will soon recover, without any permanent disability.

WOUNDS OF THE EXTREMITIES.

Upper Extremities. XI.—Caleb B. Rhode, Co. B, 26th Iowa, was wounded by a Minié ball, which struck the left arm just below the elbow, shattering both the bones and opening the elbow-joint. As the nature of the wound was such as to forbid any attempt to save the limb, I amputated it just above the elbow on the first day of February. For about two weeks after the operation the stump appeared to do well. It united in great part by the first intention, and there was

every prospect that it would speedily heal. One morning, however, about that time, he told me that he had had a terrible dream in the night, that he had thought himself to have been engaged in battle in some deadly strife, and that he was afraid he had hurt his arm during his efforts in his sleep. I immediately examined the stump, and found that the dressings were all deranged, that the adhesions which had been formed were broken up, and that the end of the amputated bone was protruded and uncovered. In his dream he had thrown his arm about in such a manner as to produce these results. I had the arm carefully dressed at once, and did all that I could to favor the healing process, but granulations did not again take place, though a generous diet was given, and tonics and stimulants were freely used. Notwithstanding all our attentions, his strength gradually diminished, and finally gangrene attacked the flap, and he died on the 24th day after the operation.

Fore-Arm. XII.—John Marshall, Co. A, 37th Illinois, was wounded by a shell which struck the left fore-arm. The whole mass of flexor muscles on the inside of the arm, from just below the elbow to the lower third, had been carried away down to the bones, but neither the radius nor ulna had been injured, nor the periosteum destroyed. I was inclined at first to amputate the arm above the elbow, especially as the patient appeared to suffer considerably from constitutional symptoms. I thought it scarcely possible that nature could repair such an extensive injury, under the circumstances in which he was placed. It was decided, however, to make an effort to save the limb. He was placed on generous diet, and received a liberal allowance of tonics and stimulants. In the course of a few days the wound improved in appearance, healthy granulations sprung up, and the wound gradually healed. I had the gratification of knowing that in this case conservative surgery had proved successful. At the end of three months the arm was quite well, though of course with a great loss of substance. He was discharged from the hospital about the 10th of April.

XIII.—P. W. Frisley, Co. D, 31st Iowa, was struck by a grape-shot which passed through the carpus of the left arm. The styloid process of the radius and also that of the ulna were broken off. The parts were greatly inflamed and swollen, and abscesses had formed on the back of the hand. Amputation being considered indispensable, I performed the operation by the flap method, as near to the carpus as the condition of the parts would admit. As he had a fleshy and well-developed arm, the stump had a very handsome appearance. It healed rapidly, and the constitutional symptoms which had existed before the operation soon subsided. The operation was performed on the 29th of January, and he was discharged from the hospital on the 15th of March.

XIV.—Allen S. Paschall, Co. E, 25th Iowa, was wounded by a Minié ball which entered the top of the right shoulder, just touching the extreme end of the acromion process, and passing downwards and slightly backwards came out on the external part of the arm, a little behind and nearly on a level with the insertion of the deltoid muscle. When the wound was received, he was advancing on the enemy's works, and stooping very low to avoid the balls which were flying over head. He held his gun in his right hand, with the elbow drawn very far back. No fracture of the bony structure could be detected,

but several small pieces of bone were found amongst the purulent discharges from time to time, which had probably exfoliated along the track of the ball when it had passed in contact with the bone and destroyed the periosteum. The pain and inflammation were great, and also the swelling; but by the steady application of proper remedies, all these symptoms were gradually reduced, and at the end of about two months the external wounds were entirely healed. The swelling had so much subsided that the shoulder had nearly regained its natural rotundity, but he is not able to raise it up on a line with the other, nor can he remove the elbow any distance from the side. In fact, the shoulder-joint appears to be, to a considerable extent, ankylosed. By passive motion, carefully and perseveringly continued for a long time, it is probable that the use of the limb might be partially or perhaps entirely regained. He was transferred to one of the northern hospitals about the 25th of March.

WOUNDS OF THE LOWER EXTREMITIES.

Femur. XV.—J. M. Philpot, Co. K, 25th Ohio, was wounded by the fragment of a shell which struck the left thigh about an inch above the external condyle, and proceeded upwards and backwards until the wound extended more than six inches in length up the external aspect of the thigh, the flesh being torn away about an inch and a half or two inches in breadth and more than an inch in depth, the bottom of the wound as well as its edges being very rough and irregular. On a careful examination of the wound and the adjacent parts, it was found that a foreign substance was lodged amongst the muscles of the external posterior portion of the thigh, nearly on a line with the trochanter major and about three inches above the superior portion of the external wound. Upon cutting down on it, the fragment of the fuse of a shell, about an inch and a half in length and an inch in breadth but of very irregular dimensions, was found and removed. The wound, after the extraction of this substance, healed rapidly, and at the end of two months and a half was entirely closed. Extensive adhesions, however, had formed while the limb was in a state of flexion, which could not be avoided, and the patient is consequently unable to bring the foot to the ground. It is quite probable, however, that by persevering efforts very carefully and gradually exerted, in the course of time he may be able to place the foot down fairly and have a pretty good use of the limb, though it can scarcely be expected that the muscles will ever be capable of performing all the natural motions perfectly.

XVI.—Samuel Webb, Co. B, 27th Illinois, was wounded above the left knee. The ball entered at the middle of the external condyle, and made a large orifice. There was also another orifice opening at about two inches from, and immediately posterior to the above, and which formed a communication with it. This lateral opening did not appear to have been made by the missile which inflicted the principal injury, but by some substance such as clothing, or some foreign body which accompanied it. As the wound was very painful and attended by profuse suppuration, it was concluded that the missile which inflicted the wound still remained somewhere imbedded in the muscles. A careful search was therefore made for it, and it was finally discovered nearly in front of the os femoris, about the upper third of the thigh, and about eight inches from the point of entrance. The ball was ex-

tracted, by cutting down upon it, on the 10th of February. It was found wrapped in a piece of cloth, about an inch square, which had been carried with it from the patient's pantaloons at the place of entrance. The ball, or more properly slug, was not round nor oblong, but eight sided, and appeared to have been cut from a bar of some kind of metal and afterwards hammered. It was not lead, but had the appearance of zinc or tin. It was a good deal larger than a musket-ball, and had probably been fired from a field-piece. The track of the ball was consequently large, and produced a good deal of suppuration. The orifice made by the extraction of the ball was not permitted to heal until the track of the ball had begun to fill up and the supuration greatly diminished. After the ball was removed, however, the wound progressed exceedingly well, and in less than two months had entirely healed. There are some adhesions, which prevent the foot from being brought fairly down, but it is probable that, by time and the natural efforts, a good if not an entirely perfect use of the limb may be attained.

Leg. XVII.—Hugh McCann, Co. D, 127th Illinois, was wounded by a Minié ball which struck the right ankle, passed transversely through the joint and fractured the lower extremity of the tibia and fibula. The malleolar process of each of these bones was broken off, and the superior portion of the astragalus had a groove cut in it by the course of the ball. Under such a state of things, it would have been idle to have expected to save the foot, and amputation was of course resorted to. I performed the operation as near as possible to the seat of injury by the lateral flap operation. The healing of the stump progressed very favorably for about ten days, when it was attacked by erysipelas. With some difficulty the erysipelatous inflammation was subdued, though a slight sloughing of the flap took place. Afterwards the wound did not heal favorably. On a careful examination it was found that a small piece of bone had exfoliated at the end of the tibia which was easily removed, and the healing process then proceeded very favorably and it is now nearly well.

It will be observed that erysipelas has prevailed to a considerable extent, and that it frequently attacked the patient after an operation. Whether it prevailed to a greater extent in this Hospital than in others similarly situated, I am not able to determine, but it will probably be found to exist more or less in every place where a number of wounded men are collected together.

XVIII.—Brian Judge, Co. D, 90th Illinois, was wounded by the accidental discharge of a Minié rifle which fell on the platform of the Railroad Station near the Hospital, from the carelessness of a boy who was attempting to go through his military exercises with it. The ball passed through the left leg of Brian Judge, and then struck Michael Wiles of the same Co., who was standing near him, on the right foot and buried itself in the inside of the calcaneum. In the case of Judge, the ball struck the ankle directly in front, just touched the top of the astragalus, making a slight groove in it, and then struck the lower end of the tibia at its inner side, fracturing and splitting that bone obliquely about an inch and a half, the highest part of the fracture being on the internal side a little more than two inches from the end of the styloid process. The ball then glanced off and turned externally towards the fibula of the same leg, passing directly through that

bone transversely, fracturing and comminuting it about on a level with the upper portion of the fracture of the tibia. The injury being of too serious a character to afford any hope of saving the limb, an operation became indispensable. I amputated the leg by the circular flap, as low down as it could be performed in reference to the injury. The stump was well formed, and the wound closed mainly by the first intention. There was but little inflammation or other symptoms to excite apprehension, and the case was proceeding remarkably well. On the fifth day after the operation, however, the stump was attacked by erysipelas, and on the next day a purple spot appeared on the skin over the end of the tibia. The stitches at the same time began to give way, and a small amount of pus, not very well conditioned, escaped from the interior of the flap. The remainder of the stitches were cut out in order to give a free opportunity for the discharges, as well as to prevent them from tearing out by the erysipelatous swelling. The tincture of iodine was applied freely and frequently to the inflamed surface of the leg, and a liberal use of tinct ferri chlor. was made internally. In the course of twenty-four hours the inflammation over the surface and the swelling which accompanied it, had very much subsided, and the purple spot over the end of the bone had nearly disappeared. The general health of the patient did not appear to have been much disturbed. His spirits were cheerful and his appetite good. A few days afterwards a slight slough took place at the spot referred to over the end of the tibia, but it did not spread, and granulations soon filled up the parts and supplied the deficiency. After this the stump did well, and the cure was effected without any further difficulty.

Foot. XIX.—Michael Wiles, Co. D, 90th Illinois, was wounded by the same ball which shattered the leg of Brian Judge, as before mentioned. The ball was of the largest size of Miniés, and after passing through the leg of Judge point foremost, it turned and struck the heel of Wiles, butt end foremost. Though the base of the ball was very much flattened and imbedded in the bone, the patient extracted it himself without the help of a surgeon before he was brought into the Hospital. He was aided in this by the fact that the ball had carried with itself partly into the wound the leather of a thick boot, and that by pulling the leather the ball came with it. It must not be understood, however, that the leather of the boot had not been completely perforated. The ball struck the calcaneum of the right foot on the inner side, about an inch in front of the insertion of the tendo-Achillis, and so near to the upper margin of that bone that it had slightly touched the inferior portion of the astragalus. The ball penetrated about three quarters of an inch in depth directly into the substance of the bone, leaving the bottom and edges of the wound exceedingly rough and jagged. For about three days after the wound had been received he had very little pain, but after that his sufferings became intense, and large and repeated doses of morphine gave him but partial relief. Large warm poultices were substituted for cold-water dressings in the hope of facilitating the formation of healthy purulent discharges instead of the sanious condition which existed. This produced some remission of the pain for a time, but with very little change in the secretions, though a slough took place from the wound about the sixth day, but still leaving it with a very unhealthy appearance. On the eighth day, however, the pain became so intense

that large doses of anodynes, frequently repeated, failed to relieve it, and the patient appeared likely to be worn down with pain and want of rest. It was determined, therefore, unless some favorable change should soon take place, that the leg should be amputated, and the pain was so intense that the patient was ready to submit to the operation. It was thought best, however, to give the wound a careful examination before proceeding to an operation. In making this examination with a probe, the wound bled to the extent of about one ounce. Soon afterwards the patient said that the pain was greatly relieved, and that the wound felt much better. From that period the acute pain disappeared, the wound put on a healthy appearance and progressed rapidly towards a favorable termination. It appears to me that the bleeding from the wound, which occurred in making the examination referred to, relieved the local congestion, and thus produced the very fortunate change which took place from that time in the patient's condition.

XX.—Matthew Johnson, Co. G, 33d Wisconsin, was wounded by a Minié ball which struck the left foot over the second metatarsal bone, a little below its articulation with the tarsus. The ball then penetrated backwards and outwards, and passed out below the malleolus of the fibula and external to the insertion of the tendo-Achillis. The joint being opened and the tarsal and metatarsal bones being extensively injured, the idea of attempting to save the limb could not be entertained, and I therefore amputated the leg by the circular operation as low down as it could be accomplished. For several days the patient appeared to be doing well, but in about a week he began to sink, and, notwithstanding all the nourishing diet and variety of tonics and stimulants with which he was supplied, his strength could not be sustained. He died on the tenth day after the operation. This patient was naturally of a feeble constitution, had been, like all the other wounded, in the same locality in a miasmatic district, and had been afflicted with diarrhoea previous to the reception of the wound. When to all these is added the exhaustion from suppuration previous to the operation, it is not surprising that he sunk under the accumulation of such unfavorable circumstances.

XXI.—Edward L. Sutton, Co. H, 27th Illinois, was wounded in the left foot by a Minié ball which fractured the second and third metatarsal bones and splintered them up into the tarso-metatarsal articulation. As the nature of the wound rendered the removal of the foot absolutely necessary, I performed the operation by Syme's method. For several days there was a fair prospect of a favorable issue, but about the fifth day a streak of inflammation was observed to run up the inside of the leg, which gradually extended to the groin. Symptoms of pyæmia came on, and he died on the eighth day after the operation. The patient was a man of feeble constitution, and had been previously worn down by diarrhoea and by the irritation and profuse discharges from the wound.

REMARKS.

The foregoing have been selected from a large number of cases which were under my care in this Hospital. They have been presented, not because they possess a greater degree of interest than many others, but because they appear to me to exhibit a fair average of the character of the wounds, and of the mortality resulting from them.

It will be observed that the cases referred to were all (except two) wounded at the battle of Arkansas Post, and that from the necessity of the case their wounds had been very much neglected, it not being possible to bring them sooner to the hospital, nor to have them more carefully treated before they arrived there.

The average mortality from secondary operations such as these were, is generally greatly in excess of primary ones or of those which have been performed soon after the wounds which rendered such operations necessary had been received. Although those I have referred to were nearly all of the former class, the results were almost as favorable as could have been expected amongst an equal number of similar primary operations.

Much has been said and written in relation to primary and secondary operations. The topic is a very important one, and I should be much gratified if some one, whose experience qualifies him for the task, would undertake to give us more precise views on that subject.

Very respectfully yours, THOS. T. SMILEY, M.D.

NOTE.—My connection with the Hospital at Memphis, Tenn., terminated on the 12th of April last. I was obliged then to return home on account of a disease with which I had been afflicted during the whole course of my residence there, and from which I had become much exhausted. The cases which I now report have been copied from notes taken before I left the Hospital, but heretofore I have not found time to copy and arrange them. S.

Philadelphia, Sept. 15, 1863.

EUROPEAN OPHTHALMIC INSTITUTIONS. No. VI.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—I venture to send you yet another of my hurried sketches, to complete the series of descriptions of the institutions of different countries. Not to speak of Holland and of Prof. Donders, would be to realize the idea of playing Hamlet, leaving out the part of the hero of the piece. Certainly, by what he has done, and what his suggestions and efforts promise to accomplish, no man deserves to stand higher. Long well known as a physiologist whose mental characteristics were those of industry and exactitude, it was to be supposed that his researches as to the phenomena of vision would be marked by the same accuracy and completeness, and that his conclusions would carry with them an unquestionable authority. Perhaps I may say, also, that no one of the distinguished oculists of Europe displays more judgment and good sense in applying his knowledge to practical use in the treatment of disease—a by no means universal accomplishment among savans.

The Netherlands Hospital for Diseases of the Eye, at Utrecht, is smaller than the institutions of some of the great cities, but has a sufficient number of cases to afford abundant examples of the various forms of disease, and to furnish frequent occasions for operative interference. It is under the charge of Prof. Donders and his assistant Dr. Snellen, both of whom speak French and English as well as Dutch and German; no slight advantage for a student who has not

acquired the language of the country. Excellent opportunities are afforded for minute examination of cases, not only of such as require simple inspection, but where ophthalmoscopic or other investigations must be had recourse to. This is exceedingly important for a learner, as he can gain more by close observation of a single case than by a superficial view of dozens of diseased eyes. The after-treatment of cases operated on, is carefully looked to, and the student can watch the results of treatment in these as well as in the other cases.

Prof. Donders has given much attention to disturbances of the refractive and accommodative power of the eye, and is now publishing his results in a collective form.

Dr. Snellen has devised a scale for testing the acuteness of visual power at different distances, which is being universally adopted as the standard, not only in ophthalmic institutions, but for army purposes. He has also invented or modified some of the instruments employed for operations, in a manner to render them more serviceable, and is a most dexterous and careful operator.

Through Prof. Donders's kindness, I not only had the opportunity of observing his practice at the hospital, but of spending entire days with him, in seeing his private patients, and witnessing experiments he was pursuing on animals with a view to discover the mode of action of the Calabar bean on the iris and the ciliary muscle. These experiments he proposes to continue by the section of different pairs of nerves, until the true agents presiding over the movements of the pupil and the ciliary muscle shall have been positively determined. Thus far, his experiments enable him to assert that the bean acts as an irritant of the third pair of nerves, whilst the sympathetic is incompletely paralyzed.

Utrecht is charmingly situated, on higher ground than the general level of the Netherlands; and not only has charming promenades, laid out on the site of its ancient circuit of fortifications, but has also pleasant environs. In this respect it is fortunate beyond the rest of Holland; which, with the exception of The Hague, offers very little beauty of scenery. These circumstances have made it the home of large numbers of people of refinement and wealth, able to select their residence in what is regarded as one of the healthiest situations in the Low Countries. This fact gives special characteristics to the city, and renders it more agreeable to the studious who assemble to enjoy the privileges of its University—whilst its distance from the crowded commercial cities makes the cost of living inconsiderable.

Holland has one peculiar institution which incidentally gives excellent opportunities for the study of chronic diseases of the eye; in its pauper colonies. These are very large, some of them comprising five thousand or more inmates, and are made up of vagrants or destitute, rendered so by misfortune or disease, or by the habits of intemperance which are said to prevail very largely among the Dutch people. All of this class of persons are sent to these colonies, which have a certain industrial character—and, as usual among such subjects, a very large number exhibit some form of ophthalmic disease. It is easy for an observer to visit these establishments, and to see great numbers of cases of almost every form of chronic disease, in every stage of the affection, with the medical or surgical treatment required for their cure.

I consider Utrecht one of the places offering most advantages for the student wishing to acquaint himself with diseases of the eye, as he will not only have quiet facilities for observation, but will witness a treatment directed according to scientific principles, and without being distorted to accommodate itself to some mere theory, or blindly pursued as a mere routine derived from old authority. The atmosphere of the place breathes of calm scientific research and patient endeavor to surmount obstacles, which, according to the opinion and practice of the teachers there, can only be defined to be, "something which should be overcome."

Truly yours,

H. W. W.

Bibliographical Notices.

On the Medical Selection of Lives for Assurance. By WILLIAM BRINTON, M.D., Fellow of the Royal College of Physicians, Physician to the Mutual Life Assurance Society, Examining Physician to the Indian Railways, &c. &c. New York: 1863.

It would be an agreeable task to speak in general terms both of the importance of the subject of Life Insurance and of the satisfactory manner in which it has been treated by Dr. Brinton. But we find that the American Editor, Dr. Morland, has, in his introductory remarks, spoken so appropriately that it would be a work of supererogation to add any words of our own. He says,

"The subject of Life Assurance, both theoretically and practically, deservedly receives a constantly increasing attention. Its advantages have become widely known in the community, and are availed of with eagerness by nearly all classes. Even those who, personally, cannot afford to pay premiums on their lives, not infrequently enjoy the benefits of a life-policy through the disinterested foresight and kindness of friends, or else are enabled to use indispensable ready money by means of a loan secured in the same manner.

"While these facts and their results are thus daily everywhere attracting more and more notice, whatever tends to perfect the science of Life Assurance, and to facilitate the decisions of the executive officers of its associations, should be warmly welcomed. The community at large, no less than the immediate members of the corporate bodies referred to, is especially interested in all that can advance our knowledge in these important transactions. To the medical profession, however, this rapidly extending work appeals with singular emphasis. Scarcely any practitioner of acknowledged capability, especially in large towns, escapes the responsibility of deciding questions relative to Life Assurance. It need hardly be said, that there is no position involving a higher degree of professional responsibility than that occupied by the medical examiner of a Life Assurance Company. But, strange as it may seem, this fact is not by any means fully appreciated, in too many instances. This does not arise from wilful carelessness, nor so much from a hasty presumption that examination for Life Assurance, where the individuals seem to be perfectly well, is a simple and easy matter, as from actual ignorance of the true relations of the medical examiner to the persons examined, and to the company which he, the examiner, represents. These, then, are what all require to know, who would acceptably fulfil the duties of medical examiner for Life Assurance. * * * * *

"The pages which follow afford this information succinctly, but with great distinctness. No similar amount of composition upon the subject, within our cognizance, compares with this pamphlet in excellence; and it is believed that no greater favor, in this regard, could be conferred, both upon the medical profession and the public, than to reprint its valuable instructions. It would appear that no right is infringed by the procedure; indeed, the accomplished author

may even feel complimented, in no small degree, by the reproduction of his little work in this country. Dr. Brinton's name has long carried authority with it, and his various writings have already won for him an enviable reputation.

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"Dr. Brinton's remarks and rules—so modestly, yet so convincingly, set forth—will, we are persuaded, commend themselves at once to medical examiners of candidates for Life Assurance; and will prove interesting and instructive to all connected with offices established for that purpose."

The treatise itself is so concise that an accurate analysis is unnecessary. We will, however, add what we consider the best recommendation, that the author evidently writes from experience. This is shown not only by the clearness and precision with which he lays down many rules, but still more strongly by his guarded language when speaking of points, the actual difficulties of which, the initiated only can appreciate.

There seems, however, to be some obscurity in his views about insanity. He says, on page 22, after his remarks on consumption, "Any attempt to estimate the importance of another of the hereditary diseases—insanity—offers us difficulties even greater than those of consumption. But as the disease itself shortens life to a much smaller extent, the tendency to it seems less significant."

Knowing that the existence of insanity in the family is generally considered a sufficient reason for declining a risk, the above language seems to convey a decidedly wrong impression. On page 59, however, the author's views are clearly stated. He says that "insanity is a state which, whether actually present or likely to obtain, as shown by family or personal history, constitutes a grave objection to the acceptance of a life." But after obtaining all the information possible concerning the present state of health of the applicant, his past history and the peculiarities of his family, the difficulty of a decision has only commenced. The points upon which it is based may, to quote the words of the author, "be sometimes made up of a variety of favorable or unfavorable circumstances, all tending one way, and therefore leaving you little doubt that it is your duty to accept or reject respectively. But it will more frequently happen that the unfavorable circumstances are so opposed by the favorable ones, as to leave you in doubt whether they are not neutralized, and practically removed, leaving a clear balance of facts in favor of the proposal.

"But even this coarse numerical illustration leaves unnoticed the chief difficulty of such decision, viz., what degree of stringency are we to use? What is our standard of health; or, conversely, our ground of rejection? Here, again, I can only confess my inability to define by words the exact boundary between a life that we may accept and one that we must decline. Even in practice, such decisions, as difficult as they are important, often tax all that we have of reason and judgment. Indeed, they are frequently based on considerations so many and complex, that we have no right to judge harshly of any conscientious opinion, however much we may personally differ from it."

Commending particularly these last remarks to all those immediately interested in Life Assurance, we will add that the pamphlet contains much of value to every physician, the questions there discussed possessing a vital interest to many whose lives are without money value, and yet when properly regulated may be made both happy and useful.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, SEPTEMBER 24, 1863.

VITAL STATISTICS OF THE AFRICAN RACE.—A Commission has been appointed by the Government to inquire into the condition of the colored population emancipated by the President's proclamation and by the Act of Congress, and to report what measures are necessary to place them in a condition of self-support and self-defence, with the least disturbance to the great industrial interests of the country.

This Commission are seeking to ascertain the vital statistics concerning the African race and the mulattoes, as well in the Northern and Middle as in the Southern States. It is very important that this should be done, but unfortunately the data do not exist. It is not known, from any wide circle of observation, whether the mulattoes are as fertile as blacks and whites; whether they are long lived; nor even whether their breed can exist permanently; that is, whether its hybridity will prevent its persistence. Then there are questions about the adaptation of the cross-breed to the northern parts of the temperate zone; questions about the effects of amalgamation upon the white race, and the like. The Commission have sent out circulars to many medical men, but they of course will not reach all who might, if called upon, give valuable aid. In our last number we printed the series of questions put forth by Dr. Howe in behalf of the Commission, and would again invite the attention of our readers to it. Those who are disposed to answer the queries, or to favor the Commission with their views upon the general subject committed to it, are invited to address Dr. Samuel G. Howe, 143 Second Ave., cor. of East 9th St., N. York.

RED VULCANITE AS A BASE FOR ARTIFICIAL TEETH. *Messrs. Editors,*—A correspondent of the London *Lancet* called the attention of the profession, some time ago, to the use of "red vulcanite," employed by dentists as the basis of artificial teeth. In alluding to the effects of this new material, he says:—

"I have at the present time a patient under my care who was supplied, some nine months since, with a set of teeth, for the upper jaw, based on 'red vulcanite,' who has been declining in health and spirits ever since he has worn them. From being a strong, healthy, muscular, and robust man, he has been losing flesh rapidly, with loss of appetite, sickness, nausea, flatulence, gastric irritation, fetid breath, vertigo, diarrhoea, &c., apparently without any assignable cause. Seeing that he wore artificial teeth, I begged to be allowed to look at them, and it occurred to me whether there might not be something prejudicial in the coloring matter of the 'vulcanite,' which was keeping up his somewhat anomalous symptoms. I requested him to leave them off for a month (much against his inclination, as he never thought about his teeth having anything to do with his indisposition), and a marked improvement in all of his symptoms followed. He has since resumed them, with a like result as before."

Subsequently, another correspondent, Dr. H. C. Roods, referred to the same subject; and in some remarks, on the influence of the coloring matter (bisulphuret of mercury) of "vulcanite" upon health, he states that a relative of his, whose previous status of health had always

been good, after wearing teeth prepared from this material for some months, began to complain of diarrhœa and an irritable state of the bowels, which persisted, notwithstanding the patient was put upon a well-regulated diet, and was subjected to several remedial agents. The thought occurred to the doctor that "vulcanite" might be the disturbing cause, inasmuch as mercurials of any kind, in the smallest doses, always produced, in this lady, great irritability of the alimentary canal.

In this community the same question has arisen—whether or not the general use of vulcanized rubber, as a basis for artificial teeth, is having a deleterious effect upon the health of those wearing it constantly, in contact with the glandular secretions of the mouth. Some cases have been verbally reported, in which there are grave suspicions that this dental material is producing an injurious influence upon the system. A case was recently related to me, of the sudden death of a man who wore a whole set of teeth on rubber. A *post-mortem* examination did not reveal any noticeable cause of death. It is not an uncommon occurrence, however, that the pathological knife fails to discover the true cause of death. It is well known that many persons are extremely susceptible to medicinal agents, however minute the quantity. The same holds true in regard to both mineral and vegetable poisons, which are often introduced into the system so insidiously that the nature and cause of declining health are not known till too late to rescue the unsuspecting victim from a premature death. "Although it appears improbable," says the *Lancet*, "that a mercurial preparation, combined with an impermeable substance like vulcanite, should escape therefrom in sufficient quantity to affect the system, still facts may prove stronger than probabilities in the matter; and although many persons wear the material without prejudice and with great satisfaction, occasionally a party peculiarly susceptible to the influence of mercury may possibly suffer from the coloring matter, and if so, it would be desirable to select some other than a mercurial pigment for tinting the vulcanite, or coralline, as it is termed."

This subject is one of some importance, and from the well-known reputation of the leading dentists of our city, we do not believe, for a moment, that they would knowingly countenance the use of any material, in their profession, that would produce injurious consequences upon the animal economy.

As physicians are the conservators of the public health, it is right and just that they should watch with careful vigilance any and every cause that may be productive of disease.

If these few thoughts shall serve to call the attention of the profession to the subject matter, in order that in cases where vulcanized rubber is used, and any abnormal consequences follow, the relation of the one to the other may be appreciated, then the object of the writer will have been answered.

ADINO B. HALL.

Boston, September 24th, 1863.

EFFECTS OF TOBACCO UPON THE HEALTH.—The London *Lancet*, in referring to the recent researches of Dr. Richardson with regard to the effects of tobacco upon the health, says:—

"In this inquiry every position has been founded on individual re-

search, and though in some instances the research has rested on the previous labors of other inquirers, the evidence has been confirmed by new observation. Condensed into a few sentences the details of the recent inquiry will be found in the following summary.

"1. The effects that result from smoking are due to different agents imbibed by the smoker—viz., carbonic acid, ammonia, nicotine, a volatile empyreumatic substance, and a bitter extract. The more common effects are traceable to the carbonic acid and ammonia; the rarer and more severe to the nicotine, the empyreumatic substance, and the extract.

"2. The effects produced are very transitory, the poison finding a ready exit from the body.

"3. All the evils of smoking are functional in character; and no confirmed smoker can ever be said, so long as he indulges in the habit, to be well. But it does not follow that he is becoming the subject of organic and fatal disease because he smokes.

"4. Smoking produces disturbances in the blood, of the stomach, of the heart, of the organs of sense, of the brain, of the nervous filaments and sympathetic or organic nerves, of the mucous membrane of the mouth, and of the bronchial surface of the lungs.

"5. The statements to the effect that tobacco-smoke causes specific diseases—such as insanity, epilepsy, St. Vitus's dance, apoplexy, organic disease of the heart, cancer, and consumption—have been made without any sufficient evidence or reference to facts. All such statements are devoid of truth, and can never accomplish the object which those who propose them have in view.

"6. As the human body is maintained alive and in full vigor by its capacity within certain well-defined limits to absorb and apply oxygen, as the process of oxydation is most *active and most required* in those periods of life when the structures of the body are attaining their full development, and as tobacco-smoke possesses the power of arresting such oxydation, the habit of smoking is deleterious to the young.

"7. In the main, smoking is a luxury which any nation of natural habits would be better without. The luxury is not directly fatal to life, but its use conveys to the mind of the man who looks upon it calmly the unmistakable idea of physical detriment.

"8. But as a luxury tending to this condition, it is probably one of the least hurtful of luxuries. It is on this ground, in fact, that tobacco holds so firm a position: that of nearly every luxury it is the least injurious. It is innocuous as compared with alcohol; it does infinitely less harm than sugar (?); it is in no sense worse than tea; and, by the side of high living, altogether it contrasts most favorably. It is most antidotal to gluttony.

"9. Tobacco may also be considered, in certain cases, as a remedy for evils that lie deeper than its own, and as such a remedy it will persist in holding its place until those evils be removed.

"We wish space permitted us to do more ample justice to Dr. Richardson's inquiry. The striking paradox involved in his statement regarding sugar, however, requires explanation."

A NEW TEST FOR MILK. By Dr. ALFRED VOGEL.—Dr. Vogel, after alluding to the different methods which have hitherto been adopted for testing the purity of milk, describes an apparatus devised by himself,

and which is founded upon optical principles. The chief adulteration of milk is water, and the quality of pure milk depends upon the greater or less abundance of oil globules which it contains. The principle on which Dr. Vogel's test is founded is the impermeability of milk to the rays of light, and his first experiment was made with a flat bottle, such as is sometimes used for keeping scents. A taper was placed behind the bottle, and a certain quantity of water was poured into it, the flame of the taper being, of course, seen through the water and the glass sides of the bottle. Milk was now gradually added to the water, until the flame of the taper became invisible, and a repetition of the experiments proved, that invariably at the moment of the addition of the same drop of milk the last ray of the light from the taper disappeared. Hence it was shown, that a measured layer of water between two parallel glasses always becomes, by the addition of a measured quantity of milk, so opaque that a light can no longer be seen through it. The same milk was then diluted with water, and it was found that a greater quantity of this diluted milk must be added in order to render the mixture opaque. Dr. Vogel's apparatus consists of the following materials, namely:—1. A glass for mixing the water and milk, having a graduated scale marking exactly 100 centimètres; 2. A test-glass, with parallel glass sides separated exactly half a centimètre from each other; and, 3. A fine, graduated pipette. Dr. Vogel gives minute directions for using this apparatus; but the principal operations consist in first pouring water into the mixing-glass, and gradually adding milk from the pipette. The mixture is then shaken and poured into the test-glass, behind which a lighted taper is placed. If the light is still visible, the mixture of water and milk is poured back into the mixing-glass, and a measured quantity of milk is added, and then the mixture is again poured into the test-glass. By a little practice, the exact time is soon ascertained when the light is on the point of disappearing, and when it has quite disappeared the experiment is at an end. It is thus ascertained how much per cent. of milk is necessary to cause the complete opacity of a layer of water half a centimètre in thickness.

This very simple, and, at the same time, ingenious, contrivance of Dr. Vogel is well worthy of attention, considering the great importance of milk as an article of diet for all classes of the community, especially children, and considering, also, that the most common adulteration of milk, namely, water, is the most difficult of detection.—*Lond. Medical Times and Gazette.*

RAILWAY TRAVEL IN ENGLAND—ITS INCONVENIENCES AND DANGERS.—The following, taken from a late English paper, possesses a little too much of the tragic to be agreeable. Why our beloved cousins should persist in locking people up in a small box, without the possibility of communicating with any one outside of it, when travelling on a railway, is more than we can comprehend. We trust that this bit of experience will lead them to adopt some of our Yankee modern improvements:—

“A Mr. McLean and a Mr. Worland took seats in a second-class carriage, by the Friday night express, from Liverpool to London. In the same compartment were a moody-looking Irishman and an elderly woman. He now and again talked to himself somewhat fiercely, and

seemed to be threatening an invisible foe. Mr. McLean and Mr. Worland glanced at him, and then continued in friendly chat. Now it happened that the man had been insane, and was rapidly growing insane again. A wild notion was fast acquiring the strength of a fixed idea. The two men, in familiar chat, were thieves planning how they could rob him, and he was resolving to be first in the field. As soon as the train had left Bletchley, the maniac drew a knife, and stabbed Mr. Worland in the head. He drew back his arm to repeat the stroke, when Mr. McLean, who seems to have had his wits about him, knocked him back into his seat. Springing up, the maniac made another dash at the now insensible Worland; but here he was again foiled by McLean, who gripped his throat and his armed hand, and a close combat begun. All the time the train flew rapidly through the country. The woman, sitting near the other window, had done all she could to alarm the driver, by wasting her screams on the morning air, and now lay insensible from the effect of terror. The madman drew the blade of his knife through the fingers of McLean, and thrust with it wildly. Worland had now regained his senses, and he at once entered into the combat, getting behind the madman, and throwing him down. The maniac's yells were louder than those of the woman; they were continuous, but neither guard nor driver heard them. For 40 long miles this scene lasted, seen by none except those engaged in the strife; until a ticket-collector, hastily opening the door, saw the two gashed and haggard men bending over the exhausted madman on the blood-stained floor."—*Hunt's Merchants' Magazine*.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 19th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	52	53	105
Ave. mortality of corresponding weeks for ten years, 1853—1863,	46.2	44.3	90.5
Average corrected to increased population	00	00	99.19
Death of persons above 90	1	0	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
10	5	3	4	0	7	5	17

COMMUNICATIONS RECEIVED.—The Use of Quinine in Malarious Districts. By George Derby, Surgeon to the 23d Mass. Vols.—Case of Extra-uterine Pregnancy. By John L. White, M.D., Jerseyville, Ill.

MARRIED,—In this city, 17th inst., Dr. Gustavus Hay to Miss Maria Crehore.

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 19th, 105. Males, 52—Females, 53.—Accident, 1—apoplexy, 2—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 1—bronchitis, 2—cholera infantum, 17—cholera morbus, 2—consumption, 10—croup, 5—diarrhœa, 5—diphtheria, 1—dropsy, 2—drowned, 1—dysentery, 7—epilepsy, 1—scarlet fever, 3—typhoid fever, 5—gastritis, 2—disease of the heart, 2—infantile disease, 1—insanity, 1—intemperance, 1—jaundice, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 1—disease of the lungs, 1—inflammation of the lungs, 4—marasmus, 4—old age, 5—premature birth, 2—spina bifida, 1—suicide, 1—syphilis, 1—teething, 1—unknown, 2—whooping cough, 4.

Under 5 years of age, 51—between 5 and 20 years, 13—between 20 and 40 years, 11—between 40 and 60 years, 19—above 60 years, 11. Born in the United States, 73—Ireland, 24—other places, 8.

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THE USE OF QUININE IN MALARIOUS DISTRICTS.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—This is the second summer I have passed with a large number of Northern soldiers in a malarious country, and certain observations which I have been able to make on the uses of quinine may interest some of your readers. Every one knows that this invaluable drug controls periodic fevers, but it is an ever new surprise, a constant cause of thankfulness, to note its wondrous efficacy. To those of our medical officers who have previously lived in regions happily exempt from these forms of disease, and many of whom are, in the spirit of modern teachings, somewhat sceptical as to the effect of remedies, the full estimate of the value of quinine is not immediately reached. The necessity for giving it in the amount required may not at once be perceived—it hardly ever is—but observation and experience lead all, I think, finally to similar conclusions.

1st. As a prophylactic. My own belief is, that quinine so perfectly antagonizes the fever-poison that, except to those who have previously suffered from the effects of malaria, the protection is complete. The inhabitants of malarious districts, those who have been born and bred in a fever country, cannot be completely protected. They get a habit of shaking, which is revived by every exposure at certain seasons. Those of our Northern soldiers who once get chills and fever, are never afterwards entirely safe in certain places, and under certain conditions. The conviction at which I have arrived, and which is so strong that I would, if an opportunity occurred, test it by passing a sufficient time on a rice plantation, is founded upon the observation of many facts, some of which I am able to give you.

During the summer of 1862, I lived in a house in Newbern, with several other medical officers. We each took two grains of quinine daily, from about July 1st till frost in November. No one suffered from periodic fever. One of our number was detailed to go to Roa-

noke Island in September, to assist the surgeons there, who were overworked. He remained there five weeks, in a region steeped in miasma, taking daily four grains of quinine, instead of two as at Newbern, and maintaining perfect health throughout the whole period, and to the present time.

During the summer and autumn of 1862, the 23d Mass. regiment were doing guard duty in Newbern. In each of the company quarters was placed, in charge of a sergeant, a solution of quinine in water, with a little aromatic sulphuric acid, and a recommendation from the surgeon that each man should take a certain amount, equal to two grains, daily. In this way enough was used to make it evident that about half the whole number of men took it daily. The sick list was remarkably small throughout the whole period.

June 21st, 1863, a company of 59 men, with two commissioned officers, was placed in Fort Spinola, one mile below Newbern, on the bank of the river. From that time till August 21st, when they were removed, every man, except fourteen, took two grains of quinine daily in watery solution. During the first two weeks these fourteen men refused to take it, and after that period I refused to give it to them unless they were sick. Of the fourteen, eight had either remittent or intermittent fever. Of the remaining forty-seven men and two officers, the prescriptions show that only seven required quinine as a remedy, and of this number one had chills before coming there, and others were exposed during the previous summer and autumn. August 22d, this company rejoined the regiment, in barracks on the bank of the river, half a mile above the centre of Newbern. I then commenced giving quinine to all in the regiment, not on sick report, who would take it, dissolved in whiskey three parts and water one, or, for a few total abstinent, dissolved in water and acid. In this way about four fifths of all in camp, officers and men, have used it for nineteen days, two grains to a man. The numbers on sick report have been as follows:—

August 22,	147	Sept. 1,	114
“ 23,	153	“ 2,	111
“ 24,	132	“ 3,	111
“ 25,	128	“ 4,	116
“ 26,	125	“ 5,	103
“ 27,	123	“ 6,	112
“ 28,	122	“ 7,	102
“ 29,	132	“ 8,	99
“ 30,	124	“ 9,	94
“ 31,	128		

You may ask why did I not give it to the regiment before? For several reasons: First, the difficulty of procuring the requisite amount, which far exceeds that which is allowed by Army Regulations. This extra amount I prevailed on the Medical Director to allow for a certain period, and I trust it may be continued. Second-

ly, an unwillingness to use whiskey as a vehicle, for in no other way could I expect it to be generally taken by a large body of men. I am of opinion that the reaction following the use of alcoholic stimulants renders the system in a greater or less degree prone to the reception of malarial poison. Still, I am content with whiskey as the second best vehicle, and the only one available.

Finally, I have, during two seasons, urged the daily use of quinine upon all fresh comers from the North, including teachers and many civilians and officers, and I believe that none of this class who took the advice have suffered from periodic fevers.

The remedial effect of quinine in intermittents is so well known that I need hardly refer to it. My practice now is to give ten grains about six hours previous to the expected chill, and two doses of five grains each in the following twenty-four hours. It rarely fails to arrest it, but the disposition to return on subsequent exposure is often apparent.

Remittent fever, which now prevails in a mild form in all the regiments about here, is controlled by quinine in a manner truly surprising. A man is found with hot skin, very frequent pulse, headache, nausea, tender epigastrium, anxious expression. Give him ten to twenty grains, and in a large majority of cases you find him on the next visit, or twelve hours afterwards, with convalescence established.

Quinine is now, indeed, our main and almost exclusive reliance, and it rarely disappoints. I think it necessary to make sure that the bowels are not constipated before prescribing it, and as a cathartic generally use Rochelle or Epsom salts. Mercurial cathartics are often better borne by irritable stomachs, but only in this respect do they seem to me preferable to the neutral salts.

The satisfaction one feels in using a specific remedy so powerful for good and yet so inert for evil, for I am not aware of any permanent effect from its use, is such that I find myself frequently wishing that some of my medical friends at home might share it. I report what I now see daily.

Very truly yours,

Newbern, N. C., Sept. 10, 1863.

GEO. DERBY,

Surg. 23d Mass. Vols.

EXTRA-UTERINE PREGNANCY.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—I yesterday attended an autopsy having much of interest for me, and I send you a brief account of the case, to be used in any manner you may deem best. The case was the wife of William H. Vanarsdale, Esq., of Macoupin County. Age, 45 years. About three years ago she became, as she supposed, pregnant; went with the usual signs of pregnancy, increasing in size

until about the seventh month, when the abdomen ceased to enlarge, and she remained in this condition for "three months," suffering considerably from abdominal tenderness, but able to be about, attending to the duties of her household. At the expiration of this time she was taken, as she supposed, in labor, and sent for her medical attendant, Dr. Webster, of Carlinville, who, on examination, informed her she was not in labor, and was mistaken in supposing herself pregnant; he administered appropriate remedies for her "pains," and left her, with directions to be sent for should she deem it necessary. She again went about attending to her duties as usual for nearly a year and a half, when there came on a very foetid, grumous and profuse discharge from the uterus, lasting for two months and reducing the abdomen to its normal size, excepting that a "tumor, something larger than her fist," was left in the right groin. At this time, Dr. Webster being absent, Dr. Halderman was called in, who pronounced the case to be "cancer of the womb." After the discharge ceased, she went on for a year without any particular medical attention, though at times having excruciating pain in the tumor. About five months ago the tumor began to enlarge, and Dr. Webster was again called to the case; the tumor gradually increased to the size of a child's head at full term, or a little larger, and she suffered pain amounting to agony. At this time I was called in consultation, and found the tumor as above described, situated low down in the abdomen and a little to the left of the median line; os uteri natural to the feel; tumor fluctuating and adherent to the abdominal walls; pain so severe and tension so great that we concluded to plunge a trocar into the tumor, which was accordingly done, and there flowed through the canula a few ounces of a gelatinous fluid, containing flakes of pus and accompanied by numerous bubbles of sulphuretted hydrogen. This was followed by immediate and great relief. I may here, in justice to Dr. Webster and myself, state that we had declared to the friends the case to be one of extra-uterine pregnancy. After some days, the opening we had made having closed and the pain returned, Dr. W. made an opening with the lancet, from which flowed quite a large amount of pus, with even more decided relief than before; but this opening finally closed, and Nature asserted her superiority as a surgeon by making an opening into the rectum, which discharged freely a very offensive matter, and so reduced the tumor that it was scarcely discoverable through the walls of the abdomen; but the poor lady, exhausted by her years of patient suffering, gradually sank, and yesterday quietly breathed her last.

Autopsy, ten hours after death. Body very much emaciated. Uterus healthy and of normal size; but on the right of the fundus, and firmly attached to it, was a sac (enlarged Fallopian tube?), adherent on the upper side to the walls of the abdomen, and on the lower to the rectum, with an opening into the bowel, and containing all the bones, perfectly macerated, of a foetus of about six months.

The practical question is, ought we to have made an opening sufficiently large and removed these foetal bones? The question, at the time I saw the case, presented itself to my mind, but the patient was so feeble I gave it but little thought. This is the first case of the kind I ever saw, and I should be glad to receive any suggestions from you. Respectfully yours, &c., JOHN L. WHITE.

Jerseyville, Ill., Sept. 9th, 1863.

[The question asked by our correspondent seems to be answered by himself. He says the question of removal occurred to him, but the condition of the patient at the time made it inadvisable. It does not appear that the presence of the foetal bones was the immediate cause of death, but the prolonged suffering arising from the inflammation and suppuration which they had caused, and the want of a free escape of the confined pus. If a freer opening had been made at the time the trocar was used, as would certainly have been justifiable, the tumor being adherent to the abdominal walls, the cause of the inflammation would have been evident and might have been readily removed; especially if the diagnosis of extra-uterine pregnancy was as confident at the time as it now seems to the writer to have been. We cannot forbear remarking, in passing, that the diagnosis seems to us to have been a bold one, as nothing is said of any evidence to the touch of the existence in the tumor of anything more than the ordinary products of inflammation in a swelling the previous nature of which had been obscure. In short, it does not appear that the character of the tumor was fully made out until the patient's condition became such as to deter the attending physicians from any operation. The local conditions seem to have been favorable for the extraction of the foetal bones. At any rate, it is to be regretted that a larger opening was not made, by which the prolonged suffering and subsequent spontaneous opening into the rectum might have been spared.—S. L. A.]

ON AN IMPROVED MODE OF USING REFRIGERATION AS AN ANÆSTHETIC AND AS A REMEDY.

BY JAMES ARNOTT, M.D.

It is now, I believe, universally admitted that, by the application of intense cold, pain may be certainly prevented in the numerous operations in which the incision is confined to the skin and the superficial textures; and few will dispute that, in these operations at least, its perfect safety gives it a great advantage over ether or chloroform. But the general opinion is, that it is more troublesome to use than chloroform, and that it is more apt to fail in producing anæsthesia from some oversight or error in the application. This idea has prevented many from employing refrigeration, except in cases where the patients have objected to chloroform, or where there

was more than the ordinary risk from its use. In hospital practice, the longer time occupied in effecting congelation has made chloroform to be preferred in almost every case. In consequence of this, many deaths have occurred from the administration of the latter in the most trivial operations—in the extraction of a toe-nail, the opening of an abscess, or the cutting off a wart.

There is nothing singular in this objection, arising from the supposed difficulty or trouble in the use of intense cold. Some of our most valuable remedies have only become generally adopted when the mode of administering them has been simplified. Artificial respiration, galvanism, and several measures resorted to in the treatment of stricture and stone, may be adduced as examples. But the most striking instance of this is found in a therapeutical agent more nearly connected with our present subject. Although sulphuric ether, when properly employed, is not inferior as an anæsthetic to chloroform, the greater trouble attending its administration would have probably very much lessened the use of etherization, had no easier mode of effecting it been discovered. Chloroform is more dangerous than ether, and has on this account been banished from some of the principal hospitals in North America and France, yet so much valued by the great majority of surgeons is its greater ease of administration, that the honor of discovering this means of facilitating anæsthesia, has been almost as keenly contested as that of the great discovery of etherization itself.

Congelation has hitherto been generally produced by placing the freezing materials on the part to be benumbed. In order to ensure success, care must be taken that the ice shall be well pulverized and rapidly mixed with the salts constituting the frigorific. The mixture must be applied by means of gauze, or some other thin permeable material; and when the part is not in a horizontal position, a gutta-percha cup fitted to it may be required to keep the frigorific in contact with the skin. Now, all this trouble may generally be avoided by the adoption of an expedient similar to that employed in the therapeutical application of extreme heat. It is rarely the case that a burning substance is applied directly to the part; instead of this, an iron, which has been previously heated in the fire, is used. In a similar way, an iron, or a brass, or a copper implement, of appropriate shape, may be previously cooled in a freezing mixture, and applied with the greatest accuracy to any accessible part, in whatever position this may be. A small, flat, laundry iron, which may be used for pounding the ice, will also answer in a great many cases as the refrigerator. If an extensive or continued refrigeration is required, two such irons, immersed in a semifluid mixture of two or three pounds of ice and salt, may be necessary to replace each other, just as two hot irons are often required for cauterization.

When a metallic body of this description has been cooled to be-

low zero of Fahrenheit, it will often arrest the circulation of the skin the instant it touches it; but more frequently it must be moved and gently pressed on the part for a few seconds, so as to bring a continuous fresh surface in contact with it while the bloodvessels are compressed.

Another expedient, partly resembling that just described, and partly that hitherto in use, consists of a thin metallic bottle (tinned iron or aluminium) completely filled with the frigorific mixture. A Florence flask will sometimes answer the same purpose.

I think the above description is sufficiently minute, and that the surgeon, by the adoption of this method, will no longer have to complain of difficulty or trouble in using congelation, either entirely to prevent pain in minor operations, or to prevent the more acute portion of pain, or that arising from incision of the skin, in operations of a deeper or severer kind. In the preface to his work, entitled "*Ten Years' Operative Surgery in the Provinces*," Mr. Prichard states, that he "refuses chloroform in the lesser operations wherever ice and salt can be conveniently applied." By means of the metallic refrigerator almost every part will be accessible. The complaint made by Messrs. Perrin and Lallemand in their recent and very complete work on "*Surgical Anæsthesia*," that congelation has been too much restricted to certain operations, will probably, by this improvement of the process, have no longer any foundation; but that, if I may be allowed to use the words of these writers, "*on peut prévoir le moment où, grace a la réfrigération, l'anesthésie pourra être étendue à toute la pratique usuelle de la chirurgie*" (page 651).

It is not, however, in being a safe anæsthetic that the principal value of congelation consists. I am anxious to see it employed as a prompt and certain antiphlogistic in all accessible inflammations. The extraordinary remedial powers of congelation in the various forms of chronic rheumatism, which I have related in former publications, may be attributed partly to its anæsthetic and direct antiphlogistic virtues, and partly to the peculiar counter-irritation which it excites. As promptness of action is eminently characteristic of this remedy, it would be especially serviceable in many of those inflammatory and painful diseases to which soldiers and sailors are liable, and which are at present cured with so much difficulty as to render them long unfit for their duties. Amongst these may be reckoned sprains and inflammatory affections of the joints, wounds, irritable ulcers, headache, lumbago, and other painful affections, inflammation of various glands, ophthalmia, erysipelas, and other diseases of the skin.

Being convinced, from no little experience, that a short application of intense cold, produced by a frigorific mixture of appropriate strength, constitutes a certain and speedy remedy of every accessible inflammation, as well as a means of preventing pain in opera-

tions, without the risk of sudden or (which has been much more frequent) consecutive death attending chloroform, I do not deem that portion of my time misspent which has been employed in devising and describing such a simple and easy mode of making this application as may lead to its general adoption.—*Med. Times and Gazette.*

OBSERVATIONS ON OVARIOTOMY, &c.; ALSO A SUCCESSFUL CASE OF EXTIRPATION OF BOTH UTERUS AND OVARIES.

BY DR. CHARLES CLAY.

[From the Proceedings of the Obstetrical Society of London.]

DR. CLAY gave a brief and very interesting outline of his experience on this very important branch of surgery. Of 109 peritoneal sections, 104 were for ovarian extirpation, 3 for cutting down upon the tumor to establish ulceration where its removal was impracticable, 1 for the Cæsarean operation, and 1 for the removal of both uterus and ovaries. Of the 104 cases, 72 recovered, 32 died; all the 3 ulcerative cases recovered; the Cæsarean section lived to the fifteenth day; and, lastly, the case of entire removal of both uterus and ovaries recovered. Of the 32 deaths, 10 died from the immediate consequences of the operation, 10 from inflammation, 10 from prostration, and 2 from hæmorrhage. The great majority of the first and second series were young females, as well as a portion of the third division. Those from prostration were chiefly elderly females. Some other statistical facts were elicited, as well as the following remarks from the author:—Dr. Clay still defends the raised temperatuae of the room for operation, and attributes much of his success to its influence; is not certain if chloroform has added anything to the successful results, although he values it highly as an agent which it would now be difficult to lay aside, although the first fourteen of his cases were performed before it was discovered, and of which nine recovered; and he still thinks, if a woman could face the difficulty without it, it would be in her favor. The large incision is still practised by him, and deemed far preferable to the smaller opening. Of course, the author wished to be understood that the incision was to be commensurate with the tumor to be extirpated. Dr. Clay gave many reasons for this preference. The distressing vomiting he conceives to be in a great measure owing to the use of chloroform, as he saw but little of it in the first fourteen cases where it was not used. For this troublesome symptom he advises patience until the blood has got rid of its load of carbon, the simplest of drinks, and as little food as possible. Some very well-ascertained facts of critical days were adduced, which would require too much space to dwell upon; suffice it to say, the third, sixth, and ninth were the principal, and the causes of each were

pointed out. No particular age seems to be prominent in respect to the success of these cases. Dr. Clay himself stated them to be about equally successful at all ages from sixteen to fifty-seven. Purgatives are not admissible; and he relies on enemas, with ox-gall, &c. This part of the paper was concluded by some interesting remarks on ovariectomy for the last twenty years, and the difficulties the author had to encounter, not the least of which was misrepresentation. The author next gave in detail a new and interesting operation, which he believed to be the first of its kind, successful at least, in this country—namely, the entire extirpation of the uterus and its ovaries through the abdominal walls, which has ended most fortunately, the lady returning to her friends on the thirty-fifth day after the operation, and still continuing well, thus establishing another great fact in reference to abdominal surgery. The case was that of a fibroid uterus of eleven pounds weight, with the ovaries in an unhealthy condition; and the tumor by its growth had latterly so entirely filled up the cavity of the pelvis as to render the passage of the fæces and urine extremely difficult. The particulars of the case throughout its progress were given. Dr. Clay does not suppose that many uterine cases could be advisedly extirpated, but thinks some of those densely-hard fibroid masses, where the constitution has not been greatly prostrated, might afford a fair prospect of cure under the knife.

Mr. Baker Brown prefaced his remarks by warmly thanking Dr. Clay for the very practical and admirable paper just read. Mr. Brown considered it one of the most valuable he had ever heard, and wished it had been brought forward a few weeks earlier, as it was calculated to strengthen the hands of other ovariectomists, and enable them to contend against those who doubted the value of the operation. With regard to the temperature of the room, Mr. Brown stated that he believed that Mr. Lane, than whom no one had been more successful in ovariectomy, disregarded this subject, as did also another gentleman present at the meeting, who had also had great success. For himself, Mr. Brown believed that where the operation was likely to be long, and the viscera long exposed, it was of great importance; but that where the operation was quick, and the viscera were kept back by hot flannels, the question of temperature would not affect the success. As to the long incisions, he believed Mr. Walne followed Dr. Clay; whereas Dr. F. Bird and Mr. Lane had contended for the short incision, and with good results. Mr. Brown always made a small incision first. If it appeared that on tapping the cyst the tumor could be withdrawn, he did not enlarge it; but if there appeared strong adhesions, or the tumor was very multilocular, he found it easy to make the incision larger, and agreed with Dr. Clay that it was advisable to see clearly where the adhesions and difficulties in removing the tumor were situated. At the same time, with the very large success of Dr. Clay, it was

folly to say that short incisions were preferable to the long. Dr. Clay still preferred the ligature of Indian hemp. Mr. Brown had used it till the invention of the carpenter's callipers as a clamp, which he found more convenient and comfortable. He could not, however, agree with Dr. Clay as to the inadvisability of bleeding. In two or three cases where peritonitis had come on quickly after the operation, he had found venesection most valuable, and attended with success. He always advised hot linseed-meal poultices to be applied over the whole abdomen when there was a chance of peritonitis, believing that they kept hot longer than ordinary fomentations. Mr. Brown's experience as to the frequency of the ovary attacked was contrary to Dr. Clay's. He had examined many hundreds, he might say thousands of cases, but thought that one could not decide which ovary was diseased till an incision was made. His experience, from cases submitted to operation, was that the left ovary was most frequently affected. He agreed with Dr. Clay that age does not make much difference. He was glad to hear that Dr. Clay had come to the conclusion that the question of success did not depend on the operation itself, but on the after-treatment. Mr. Brown believed that in his earlier operations he lost more patients because the after-treatment was not so well understood as now. He had learned from Dr. Clay the valuable practice of never giving the patient anything but the most simple food till asked for. He preferred giving beef-tea and wine, if required, by the rectum for three or four days after the operation. Mr. Brown considered Dr. Clay's testimony valuable as to the great advantage of small over general hospitals for these operations, not on account of the operation itself, but because the nursing, ventilation and atmosphere were so much better in small special institutions. Mr. Brown had twice removed both ovaries with success. He thought that the question of exploratory incisions had been unfairly treated by the profession. They were made with an honest endeavor to ascertain the truth before risking the patient's life. Mr. Brown had never seen a fatal result follow them, and thought they should be commended and encouraged, not condemned. He was glad to hear Dr. Clay say that in his last operation he had made it a stipulation that it should be left to him to decide whether he should proceed after making an incision. As to opium, Mr. Brown had at one time been as great an advocate for it as Mr. Clay; but he believed that it increased the sickness, and he now never gave it unless imperatively called for.

Mr. Spencer Wells said that he must not be supposed to undervalue the very useful paper of Dr. Clay, or to be ungrateful for the lessons which he had taught us all by his able advocacy of ovariectomy, if he (Mr. Wells) ventured to discuss two very important steps of the operation in which his own practice, and the practice in London generally, differed from that of Dr. Clay. Dr. Clay still advocated the long incision; and he still left the tied end of the

peduncle and the ligature within the peritoneal cavity. He could boast of a success attending this practice of 70 per cent. of recoveries to operations, and as success was the best criterion in surgery, it might seem presumptuous to question the wisdom of any operative proceeding practised so successfully. But his (Mr. Wells's) own experience had led him so decidedly to prefer the short to the long incision, and to keep the tied end of the pedicle outside rather than to leave it in, that he could not help suspecting that Dr. Clay's great experience in the operation had led him to success in spite of a method which more recent experience had modified or corrected, and which men of less experience could not follow without great danger of failure. After long incisions there was so much more exposure or escape of intestine during the operation, so many more serious symptoms after it, and so comparatively protracted a recovery, even in successful cases, that his (Mr. Wells's) own experience had taught him to avoid any greater length of incision than was necessary for the exposure and removal of the cyst or tumor. Every inch in the length of the incision appeared to add something to the chances against the patient, and in cases where he had the choice either of making a long incision and removing a tumor entire, or of breaking up a tumor and removing it through a small opening—even though ovarian fluid might unavoidably escape into the peritoneal cavity and require careful sponging for its removal—he would prefer this alternative rather than make a very long incision. So, in his experience, those patients in whom it had been necessary to leave the pedicle and ligature within the peritoneal cavity had suffered so much more after the operation, and their recovery had been so much more protracted than others where the peduncle had been kept outside, that he would always prefer to keep it out if he could, and so avoid the danger of absorption of the putrid matter of the strangulated stump, or the peritonitis connected with the effusion of fibrine thrown out to circumscribe the stump and ligature. It seemed probable that the frequent occurrence of peritonitis in Dr. Clay's practice was in some measure due to his manner of treating the pedicle; for in his (Mr. Wells's) own practice, peritonitis was a rare accident. Of eighteen fatal cases, it had only had any important share in the fatal result in two; in all the others, shock or exhaustion after the operation, or blood-poisoning, having been the cause of death; while in successful cases he hardly remembered peritonitis in any patient where the pedicle had been kept out. As to the temperature of the room, in his earlier cases he had followed Dr. Clay's practice; but latterly he had found it better simply to have the room kept comfortably—not excessively—warm, and after the patient was in bed to keep a good fire burning and a window open night and day. In the use of opium, also, he had learnt to avoid all excess. If there was pain or restlessness, it was given in moderate doses, and repeated if necessary; but some patients

had recovered without taking a single dose, and others with not more than two or three doses. Sometimes it was given to secure a good night, even if there was no pain. With regard to the removal of uterine tumors by abdominal incision, it was only under the most exceptional circumstances—where the life of the patient was in great danger from hæmorrhage or the effects of pressure—that such an operation as that so successfully performed by Dr. Clay could be justifiable. Pedunculated peritoneal outgrowths from the uterus might be removed with moderate risk, and so might in-growths towards the uterine cavity or vagina; but any attempt to enucleate interstitial fibrous tumors of the uterus, either by incision through the abdominal wall, or by incising the cervix *per vaginam*, was attended by such very great risk that nothing but the most urgent necessity would justify the practice. He (Mr. Wells) said this rather as the result of his own observation, than as any conclusion suggested by Dr. Clay's successful case.

Dr. Clay, in reply, expressed his great gratification at the manner in which the paper had been received by the Society. With respect to the details of the operation, he adhered to the principles laid down in the paper. It was remarkable that many of the best recoveries after ovariectomy had taken place in his practice after making the long incision, and where the tumor was large he preferred it. The use of Indian hemp for ligatures he still preferred. With respect to the remarkable case of extirpation of the uterus, he would observe that on his way to town to attend the meeting he had accidentally met the patient who had been the subject of the operation, at a railway station, and in perfect health.—*Ibid.*

Bibliographical Notices.

A Manual of Instructions for Enlisting and Discharging Soldiers, with especial reference to the Medical Examination of Recruits, and the detection of Disqualifying and Feigned Diseases. By ROBERTS BARTHOW, A.M., M.D., Ass't Surgeon U. S. Army, Surgeon in charge of McDougall General Hospital, Prof. of Mil. Med. Jurisprudence, Army Medical School. Adopted by the Surgeon-General for issue to Medical Officers of the Army. Philadelphia: J. B. Lippincott & Co. 1863.

THE author of this little volume was one of the board recently convened at Washington to determine the infirmities which should exempt from military service men drafted under the Enrolment Act. He therefore speaks from an authoritative knowledge of the subject, and his book supplies a want which has long been felt by examiners of recruits, that of an uniform, fixed standard of qualification. The author wisely adopts the principle that it is hardly possible to be too strict in the examination of recruits, the efficiency of an army consisting in the quality of the material of which it is composed rather than the quan-

tity. It is hard to make the community look upon the subject in this light, partly because it makes the draft more searching in its operation and does not allow able-bodied men to fill up the ranks with substitutes not physically capable of bearing arms. We trust, however, that the time has come when the enlistment or mustering in of men who become mere incumbrances from the first has ceased, and this crying evil has reached its final abatement. So far as this desirable consummation may depend on a definite knowledge of the duties of an examiner, Dr. Bartholow's volume is an authority which henceforth leaves no excuse for ignorance.

In order to cover the whole subject, the author divides his book into four principal sections; the first, on real disqualifications for military service, comprised in three classes: mental, moral, physical. Second, on pretended disqualifications, which constitutes a separate section on feigned diseases. Third, on the qualifications of recruits, and enlisting soldiers. Fourth, on discharging soldiers.

The work contains a great deal of interesting matter apart from the definite instructions which it gives on the leading topics, and is well deserving of the authority which has been given to it by the Surgeon-General. It is handsomely printed, and furnished with an index, and a glossary for unprofessional readers.

A Manual of Minor Surgery. By JOHN H. PACKARD, M.D., Demonstrator of Anatomy in the University of Pennsylvania, one of the Visiting Surgeons to the West Philadelphia Military Hospital, &c. &c. With 145 Illustrations. Authorized and adopted by the Surgeon-General of the United States Army for the use of Surgeons in the Field and General Hospitals. Philadelphia: J. B. Lippincott & Co. 1863.

This is an admirable little book, of about three hundred pages, and fully justifies the encomium of the examining board appointed to report upon its merits, "that it is a better text-book upon the subject than any of the treatises with which the American market has hitherto been supplied."

The style of the author is remarkable for conciseness and clearness, and his directions for treatment, and descriptions of the various manipulations of minor surgery, are given with excellent good sense, showing a practical familiarity with the subject. The illustrations are many of them new, and all are good, and add much to the value of the work. It is very well printed also, and, taken altogether, must be a welcome addition to the travelling library of any Army Surgeon.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 1, 1863.

LIGHT GYMNASTICS.—Among the many seductive arguments employed by Mr. Darwin with such fascinating power in his work upon the origin of species, none is more elaborately illustrated or more convincing to the reader than that relating to the influence of natural selection

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upon animal life. Even those who cannot go so far as to agree with this eminent naturalist in his application of this law to the supposed constant and independent advance in rank of the animal kingdom, must at least acknowledge its importance in preserving the standard of species in its original integrity. It is a law, however, not created for the dumb animal alone, but for the preservation of the genus homo as well, and its effects are as manifest in the natural history of the savage as in the beast of the plains. Even the so-called cruel laws of Sparta were framed with distinct reference to its teachings, and Frederic the Great wished he had been powerful enough to enforce its universal application for the improvement of his armies. Civilization, however, is its direct antagonist. It has indeed cultivated the heart of man, but has to the same degree neglected his body. It was not enough to teach the cruelty of strangling female infants or of exposing puny children to nature's untempered protection; it has taught man, also, that sentiment, not sense, must rule in the selection of his mate, and woman that a slim waist and pale skin are of more importance than the physique of her future offspring.

Within the last few years, however, a reaction seems to have taken place in the world of fashion, and muscular christianity, a creed founded upon common sense and the observance of nature's laws, is gaining converts among all civilized nations. Young men are ceasing to worship Apollo, the drawing-room exquisite, and Hercules and Mars are now the model gods. Stiff dickies and tight frocks and trowsers are thrown aside, and pliant collars and loose-fitting garments, which the dust will not spoil, allow full freedom to the natural motions of the body. Dundreary has become a laughing-stock, and the best oarsman and the bravest in the fight are now the honored favorites. Young men are learning that a slim waist and delicate color may be desirable in the partner of a ball-room, but that the girl whose veins are flowing with healthy blood, and whose complexion shows it during exercise, is the proper mother for his children, and that a sick wife does not make a happy home. Young ladies themselves are slowly learning the same important truths, and are dressing to-day more in accordance with the laws of health than even a few years ago, although great changes are still necessary in this respect. Thick boots, Balmoral skirts, and hats which protect the whole head, are long steps in the right direction, but improvement in woman's dress, to be real and unchanged by fashion, must begin from within. The intrusive wind on these autumnal days reveals to all who choose to see that the merest film of fine linen or cotton is the only close protection worn by her below the waist against its chilling influence, while strong man finds it necessary to clothe his own legs in more than one thickness of woollen. Young ladies now-a-days return from the seashore boasting of hands well tanned by rowing and with some dozen pounds extra weight of good country flesh, which will go far to support them through the exhausting season of furnace heat which is fast approaching. There is no reason, however, why summer should be the only season for health-making; there are other exercises besides hill-climbing, swimming and boating, which may be profitably employed within doors at all seasons.

We have seldom spent a pleasanter evening than in witnessing, a week or two ago, the exhibition of Dr. Lewis's class in light gymnastics. The performers were mostly adults of both sexes, and were

chiefly young men and women from nearly all the States, who have come here to perfect themselves as instructors in the system of physical education, which he has so successfully connected with his name by its introduction into this country. We were astonished at the grace and ease exhibited in the amazing number of changes in the different exercises, and the full share which every muscle known to the anatomist must have borne in their performance. The movements were both slow and fast, but none were of such a nature as to forbid their employment by the youngest or most delicate person, and in this consists their great superiority over heavy gymnastics, both for the development of weak frames and the correction of muscular defects. We should like to see this system introduced into every school in the city, and made as much a part of every day's exercises as the mental training now so exclusively attended to. We believe that six years of physical education thus enforced would cause a wonderful change in the health and bearing of our future citizens. If civilization has been the cause of the physical deterioration of the human race by allowing the weak and diseased an equal opportunity with the vigorous of continuing the species, she has, as in most other instances, suggested a remedy for her evil in the various means devised by man for the preservation and restoration of his strength, and among these, none, we believe, is of greater value than such a thorough system of bodily training. We trust we shall yet see the time when a portion of each day shall be as conscientiously devoted to this purpose as is now the case with our eating and drinking, and when muscular christianity shall hold its proper rank in our *religio medici*.

RESTORATION OF DR. GRAVES.—We are pleased to learn that Dr. Graves, of the Marine Hospital, Chelsea, has been authorized to resume his duties of Examining Surgeon for the Pension Office. His appointment was revoked in consequence of misrepresentations made to the Department at Washington, by some interested party, that he was an *Army Surgeon*. The Commissioner, on being finally convinced of his error, fully restored him, with this explanation:—"I will add that your services have always been acceptable, and that my recent action was based on the supposition that you were an *Army Surgeon*, and as such entitled to act on invalid cases without fees." The conduct of the Commissioner has certainly been most unjustifiable in thus removing, without any investigation or explanation, gentlemen of such known integrity as Drs. Graves, Shaw and Sprague, and upon no other grounds, as the restoration of the former indicates, than the false statements of some unknown party. We leave it to the profession to form their opinion of the conduct of this informer, who has thus dared to trifle with the reputation of honorable men.

THE following extracts are taken from "Wild Scenes in South America, or Life in the Llanos of Venezuela, by Ramon Paez":—

"The price of horses in the country is greatly enhanced of late in consequence of a devastating disease, which has been raging among them for several years past. . . . Great numbers of the inhabitants were also carried away by the same scourge, which swept over the land like the cholera, not even sparing the fish in the rivers.

"This frightful epidemic, which the Llaneros have appropriately

styled *Peste*, or plague, is supposed to have originated in the great primeval forest of San Camilo, at the head waters of the Apure, from decomposition of the vegetable detritus accumulated there during centuries. From thence, travelling eastward along the course of the river, the epidemic continued its ravages among the inhabitants of the towns and villages situated on the right bank, attacking first one place and then another, until the whole province scarcely escaped depopulation. Even when the mortality abated, the country, which until then had possessed a most healthful climate, never recovered its former salubrity; fevers of a more or less dangerous character prevail from that time, especially towards the end of the rainy season, while the raising of horses has been entirely abandoned in consequence.

"The first symptoms of the epidemic appeared among the crocodiles, whose hideous carcasses might then be seen floating down the stream in such prodigious numbers, that both the waters and air of that fine region were tainted with their effluvium. It was observed that they were first seized with a violent fit of coughing, followed by a black vomit which compelled them to quit their watery home, and finally find a grave amongst the thickets on the river banks. The disease next attacked the fish and other inhabitants of the water, with equal violence, until it was feared the streams would be depopulated. The fearful mortality among them can be better estimated from the fact that, for more than a month, the rippling waves of that noble river, the Apure, were constantly washing down masses of putrefaction, its placid surface being by them actually hidden from view for several weeks.

"The next victims were the pachidermata of the swamps, and it was a pitiable sight to see the sluggish *chiquires* (capyvaras) and the grizzly wild-boars dragging their paralyzed hind-quarters after them; hence the name of *derrengadera*, applied to this disease.

"Not even monkeys in their aerial retreats, escaped the contagion, and their melancholy cries resounded day and night through the woods like the wailings of the eternally lost.

"It is a singular fact, that while the scourge did not spare any of the countless droves of horses roaming the savannas of the Apure and adjacent plains, donkeys and horned cattle were seldom, if ever, attacked, so that, by their aid, the owners of cattle-farms were enabled to prevent the entire dispersion of their herds."

The following may account for the occasional development of malignant pustule among those who handle hides from South America:—

"It was late in the evening when we partook of our only meal that day, and we afterwards retired to rest, but not to sleep, owing to the incessant noise made by the cattle in the corrals, who, during the whole night, were rushing to and fro as if goaded by demons. Sometimes we feared that the fences would give way before their mad onset, while the dust rose in suffocating clouds, filling the atmosphere and mingling with our food, which was thus rendered almost unfit for use. The bellowing, roaring and moaning of the herd could only be likened to the wild confusion of a battle-field. Many of the savage bulls in their fury turned their horns, sharp as bayonets, against their own kindred. The proud padrote, his dusky mate, and the tender heifer, shared alike in the slaughter. The next day numbers lay gored to death in the dust of the corrals, while others presented ghastly

wounds. Soon the carcasses began to putrefy, which, added to the particles of dust floating through the air we breathed, rendered the atmosphere intolerable. Many more of the cattle died of suffocation, and others from an infectious disease induced by the crowded state of the herd and the noxious exhalations from the carcasses. We therefore lost no time in branding them that they might be set free, lest the infection should extend to the whole herd.

"Animals affected in this manner exhibit no symptoms of the disease until immediately prior to their demise, when they are observed to stagger a few paces and drop suddenly, as if shot by a rifle-ball; and yet the vultures seem to possess an intuitive knowledge of this approaching dissolution, in proof whereof, numbers of these feathery satellites of death can be seen hovering around an animal which the scourge has doomed, although it is apparently still in perfect health. The infection, fortunately, is confined to the horned cattle, no instance of its transmission to other creatures occurring, except in the case of men venturing to skin the carcasses, when it assumes a different form. Persons who have thus exposed themselves are seized with a horrible swelling of the neck, commencing with a pimple not larger than a pin's head, and gradually increasing in size until it extends to the cerebellum. Death is the inevitable result if the patient is not promptly attended by a skilful physician. There were two or three cases of the kind among our own people, but by careful treatment we were fortunate enough to save them. There are, however, every year many poor fellows in that improvident region, who, not having the same advantages, are carried away by the distemper."

Among the descriptions of the native plants and snakes of those regions, the author makes the accompanying statements with regard to some of the poisonous varieties, and those of the former which are employed as antidotes to the virus of serpents:—

"Great care was necessary in selecting spits for roasting the beef, on account of a most poisonous shrub, the deadly *guachamacá*, abounding there. It belongs to the extensive family of Apocineæ, or Dogbanes, whose poisonous qualities are known all over the world. So virulent is this poison, that meat roasted on spits made from the *guachamacá*, absorbs sufficient poison to destroy all who partake of it. The lazy Indians make use of it to kill without trouble the cranes and herons on the borders of the lagoons. For this they procure a number of sardines, besmear them with the juice of the plant, and spread them along the places frequented by those birds. The moment one of them seizes the fish, and before it is fairly swallowed, the bird drops dead; then the indolent hunter, issuing from his hiding-place, cuts off the parts affected by the poison, usually the head and neck, and feels no scruple in eating the remainder.

"A dreadful case of poisoning by means of this plant had just occurred at Nutrias, soon after our arrival on the Apure, which created for a time great excitement even amidst that scattered population. A woman who lived with a man in the vicinity of that town became jealous of the attentions he bestowed upon a charming neighbor of theirs, and determined to avenge herself, but in some manner that would not excite suspicion. In those remote regions, where coroners and chemists are unknown, it is impossible to detect murder, except where marks of external violence are visible. Accordingly, she prepared

for her lover a bowl of *masato*, a favorite beverage of the country, made of Indian corn boiled, mashed in water, and fermented; in this she soaked chips of the poisonous plant, and offered it to him with smiling grace. Delighted at the sight of the tempting bowl, the unsuspecting lover invited several of his neighbors—among them the hated rival—to share it with him. The woman, not intending to destroy any but her perfidious lover, during his absence prepared another bowl, omitting this time the poison. Llanero politeness obliged the host, however, to mix his portion with the others, which having done, he invited the company to dip their calabash cups into the bowl. Out of eleven persons there assembled, among them several children, not one escaped except the wicked perpetrator of this wholesale murder; nor even the donkeys and fowl of the household, as their attentive master had thrown them the remains of the deadly mixture.

“Such is the dread in which the Llaneros hold this plant, that I was not even permitted to preserve the specimens of fruit and flowers I had collected, with the object of ascertaining, on my return to the Valleys, the botanical characters of the species. They almost threatened to desert, if I insisted upon carrying them among my baggage.

“The propagation of this plant throughout the Apure appears to be of recent origin, none of the oldest inhabitants recollecting to have met with it until within a comparatively short period.

“Another singular practice obtains among the Llaneros; it is that of inoculation with the juices of certain plants possessing alexipharmic virtues, after which the most poisonous snakes may be handled with impunity. It is asserted, moreover, that *cerrados*—as individuals thus inoculated are termed—are not only proof against the bite of these reptiles, but can attract them around their persons by merely clapping of hands or whistling for them in fields where they abound. Having never witnessed any of these experiments, I will neither undertake to uphold the truth of this assertion, nor will I question its veracity; but there are hundreds of reliable persons in the country who will unhesitatingly swear to its efficacy; among them, is the testimony of Dr. Benites, a professional gentleman who has published the result of his experiments in a small book on the *materia medica* of the country. With the view of ascertaining the alleged properties of the guaco, he devoted much time, while at La Victoria, in experimenting with various kinds of snakes; from him I quote the following passage:—‘The guaco possesses in a high degree the faculty of preserving man and animals in general from the terrible and fatal effects of the bites of serpents. This valuable secret, discovered in Bogota by the celebrated naturalist, Don Celestino Mutis, in 1788, remains still as such among some *curanderos* of our own country, who, under certain mysterious forms, and availing themselves of the fangs of serpents, puncture several slight incisions in certain parts of the body, which they fill with the powdered leaves of the guaco previously made dry, and administer the same internally, mixed in common rum. This property of the guaco is so reliable, inoculation by means of the juice such as was practised by Mutis himself so well authenticated, and the facts concerning it so well attested, that there cannot longer exist the least doubt in regard to its efficacy. I wished to convince myself by actual experiment, and can testify that in a thousand trials of inoculation practised by myself in different ways on patients whom I allowed to

be bitten by various kinds of snakes, I never knew one to fail. Suffice it to say that the principal amusement of children in this place is to catch, carry about and play with snakes, and that even young ladies keep them in their bosoms or coil them around their necks.' . . .

"The guaco is employed, moreover, in various other disorders of the system with great success. In chronic rheumatism it is an invaluable remedy, both in the form of poultices made of the fresh leaves, or by simply rubbing the part affected with a decoction of the plant in spirits, and taking internally one or two ounces of the expressed juice, morning and evening. Administered in the latter form, it is an efficacious remedy against hydrophobia, if given immediately after the person has been bitten by a mad dog. General Paez was thus saved, when a youth, from this dreadful scourge of tropical countries; he has, nevertheless, retained in after life some evil effects of the virus still in his system, manifesting itself in a tendency to severe spasmodic affections, especially at the sight of a snake, which invariably induces violent convulsions.

"Next to the guaco in importance as an alexipharmic, may be classed the *raiz de mato*, including several varieties of Aristolochias, the roots of which are intensely bitter. As its name implies, it is said to afford the *mato*—a large species of lizard—a prompt antidote against the bite of his old antagonist, the snake. There would seem to exist some ancient grudge between these two reptiles, many persons asserting that whenever they come in sight of one another, they instantly rush to the attack, the *mato* never failing to overcome his rival by his superior botanical knowledge; this, or his instinct, prompts him to seek the plant, and, swallowing some of the leaves, returns recuperated to the fight.

"It was doubtless from this circumstance the knowledge was first obtained respecting the valuable properties of the plants; and it is not a little remarkable that people in different parts of the world, unacquainted with the botanical structure of Aristolochias, should have discovered in them properties of equal merit, and classed them under the same vernacular name."

THE following is the report of the *post-mortem* examination of a man who came to his death in Providence, last week, under these circumstances. He entered the house of another person, who was lying upon the bed recovering from a fit of intoxication, a scuffle ensued, and shortly afterwards the deceased was found in a dying condition, or dead, by the outer door.

"We, the undersigned, physicians of the city of Providence, county of Providence, and State of Rhode Island, being called upon to make a *post-mortem* examination of the body of Hugh Tierney, at the Police Station on Canal street, in this city, do testify to the following: Upon the right side of the forehead was a bruise breaking the skin, one inch and a quarter long by a quarter wide. There was a smaller and lighter bruise upon the left side of the forehead. There was a fracture of the bones of the nose and of the edge of the superior maxillary bone, all evidently done by one and the same blow. There were no other marks of violence upon the body. Before opening the chest and removing the breast bone, it was found fractured midway between the fifth and sixth ribs. On the inner side of the breast bone, on the right edge, was effused blood, the result of this fracture. In the loose cellular tissue under the breast bone, called the anterior mediastinum, was effused a large quantity of coagulated blood, extending the whole

length of the breast bone. The pericardium, or heart sac, was distended to its utmost with clotted blood and its serum—probably a pint and a half. Upon removing this we found a rupture, above one inch in length, in the ascending cava, or the large vein that brings the blood from the lower part of the body to the right side of the heart. Upon further examination, we found a rupture of the left auricle, near a half inch in diameter. This rupture was at the apex of the auricle, commonly called the dog's ear. There was also a tear of the heart's sac itself more than two inches, at the point where it is reflected from the base of the heart and large vessels, from which escaped the blood found in the mediastinum mentioned above. Upon opening the heart, there was found a laceration of the lining membrane of the heart, at the base of the wall dividing the two auricles, three quarters of an inch in length. There was a rupture of the membrane covering the liver, three inches in length, and effused blood had peeled it up over a space of three by four inches. About two ounces of clotted blood was found in the abdomen, from the rupture of the liver.

"From the foregoing facts, the undersigned give it as their opinion that the said Hugh Tierney came to his death from rupture of the heart, caused by violence.

J. W. C. ELY, M.D.

G. L. COLLINS, M.D.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 26th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	54	49	103
Ave. mortality of corresponding weeks for ten years, 1853—1863,	48.5	43.6	92.1
Average corrected to increased population	00	00	100.94
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
13	4	2	3	0	6	2	10

BOOKS AND PAMPHLETS RECEIVED.—Harris's Dental Surgery.—Disinfection of Vessels. By A. N. Bell, M.D.

JOURNALS RECEIVED.—London Lancet, July and August, 1863.—American Med. Times, vol. vii., Nos. 6-13.—Journal de Médecine de Bordeaux, August, 1863.—Chemist and Druggist, vol. iv., Nos. 48 and 49.—Sanitary Reporter, vol. i., Nos. 7, 8, 9.—Cincinnati Lancet and Observer, August and September, 1863.—Chicago Med. Journal, Aug. and Sept., 1863.—Dental Register of the West, Aug., 1863.—Buffalo Med. and Surg. Journal, Aug. and Sept., 1863.—Medical News and Library, Sept., 1863.—Chicago Med. Examiner, vol. iv., Nos. 7, 8 and 9.—Med. and Surg. Reporter, vol. x., Nos. 13-21.—Dental Cosmos, Aug., 1863.—Eclectic Med. Journal, Aug., Sept. and Oct., 1863.—Pacific Med. and Surg. Journal, July and Aug., 1863.—Canada Lancet, vol. i., Nos. 6 and 7.

MARRIED.—In North Wrentham, Sept. 24th, Dr. Silas P. Holbrook, of East Douglass, to Miss Jennie M. Campbell, of N. W.

DIED.—In Cambridge, Sept. 25th, Henry S. Plympton, M.D., Assistant Surgeon U. S. N., 25.—In South Abington, Sept. 21, Dr. C. G. Holbrook, formerly of Boston, 57.—In San Francisco, Cal., Sept. 24th, Dr. H. M. Gray, formerly of New York.

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 26th, 103. Males, 54—Females, 49.—Anæmia, 2—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 5—disease of the brain, 4—bronchitis, 3—cholera infantum, 10—cholera morbus, 1—consumption, 13—croup, 4—diarrhoea, 5—diphtheria, 5—dropsy, 2—dropsy of the brain, 4—drowned, 1—dysentery, 6—fever, 1—scarlet fever, 2—typhoid fever, 2— hæmorrhage, 1—disease of the heart, 2—infantile disease, 1—intemperance, 2—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 7—old age, 1—paralysis, 3—premature birth, 1—puerperal disease, 1—purpura, 1—rheumatism, 1—scrofula, 1—sore throat, 1—tabes mesenterica, 1—teething, 1—tumor, 1.

Under 5 years of age, 53—between 5 and 20 years, 6—between 20 and 40 years, 14—between 40 and 60 years, 12—above 60 years, 18. Born in the United States, 71—Ireland, 23—other places, 9.

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THREE CASES OF CRANIOTOMY.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

By HENRY L. SHAW, M.D.

CASE I.—Ellen C., aged 35; Irish; fourth child; below the ordinary stature, and of delicate build. This patient did not go to the full term of pregnancy. From the data she gave me, which appeared to be correct, she was nearly eight months advanced. While carrying this child she has worked harder than usual; she attributed her premature sickness to a hard day's washing. Her previous labors have been natural, and the children healthy. Labor commenced Dec. 1st, at 8, P.M. The membranes ruptured at 11½, P.M., as I learned from the midwife in attendance. There was but a small quantity of liquor amnii. Since the rupture of the membranes, the patient had been upon the floor, where the nurse had been trying to deliver by the arm, which was presenting. My first visit was Dec. 2d, at 2, A.M. She was then much fatigued from the severe pains, together with the violent efforts which had been made by the midwife to force a delivery. The os was large enough to admit the hand, not very soft; the head was presenting above the brim, the face towards the right side. The left arm, quite cold, was also protruding into the vagina. Whether this was the presentation, or attempts had been made to draw the hand down, could not be ascertained. The vagina was extremely hot. On examination over the abdomen, no signs of foetal life could be detected. The woman, herself, had not perceived motion for several days. Her pulse was high, and she complained of headache. The pains, from the commencement, had been regular and powerful.

After having examined into the condition of the bladder and bowels, the woman was placed in position preparatory to turning, on the left side across the bed, the knees supported by an assistant. Whilst the right hand was used to support the uterus, the left was free for manipulation. The hand was carried through the vagi-

and into the os with ease; but before a foot could be grasped, pains of the most violent kind came on in rapid succession, during an interval of which a foot was seized, and several efforts made to turn. By this time, which occupied several minutes, the hand was so completely paralyzed as to render it useless, and it was withdrawn. The pains in this case, as has been frequently noticed in turning, came on with renewed intensity as soon as the hand passed through the os, and seemed to abate almost immediately on its withdrawal. During this time I ascertained that the placenta was entirely detached. After a short respite, a second trial was made; the child could be rotated, but all efforts at version were fruitless.

As a long time had elapsed since the rupture of the membranes, the obstacle to turning was attributed to the severe pains, which had materially reduced the size of the uterus. A more careful examination was now made, and the cause of the delay easily accounted for: the head proved to be much enlarged; the sutures were not separated, as is usual in hydrocephalus. The anterior fontanelle was full, and fluctuated on touch. There was also a marked bulging of the frontal eminences. As the diagnosis was now certain, craniotomy was, of course, the only expedient. Dr. Damon was called, and preparations made for the operation. After an hour's unavoidable delay, the woman was etherized and placed in the usual position. A pair of straight scissors were carried up to the head (the fingers of the left hand acting as a sheath), and the parietal bone opened. As soon as the instrument had penetrated the dura mater, it was followed by a copious gush of water, estimated at about a pint. The scissors were carried to the base and the brain well cut up, when they were withdrawn, accompanied with a marked collapse of the head. Short forceps (being the only ones at hand) were applied, but as they slipped upon every effort at traction, the child was turned and delivered. The placenta, which was perfectly bloodless, was also removed. As the pains were now feeble, although there was less than the usual amount of hæmorrhage, hardly enough to soil the hands, ergot and stimulants were administered. The uterus continued large and uncontracted (despite the usual remedies, which were assiduously persevered in) for more than two hours, when it had decreased enough to render it safe to leave her.

2d.—Passed a good night. Pulse 75; tongue looks well; uterus continues unusually large; abdomen tympanitic. Complains of after-pains. Has had beef-tea and gruel.

3d.—A good night. Uterine tumor decreasing; abdomen still tympanitic. Complains of headache; breasts active; lochia moderate; pulse 80. Ordered *ol. ricini* and *ol. terebinth.*

4th.—Found her reclining in bed. Pulse 72.

6th.—Four days after delivery, around the house.

From this date nothing unusual occurred. The child, a male,

was larger than the average, and had an atrophied appearance. The circumference of the head, when collapsed, was seventeen inches. The bones were but partially ossified. The frontal eminences were very prominent. The anterior fontanelle was large; the posterior could not be detected. The sutures, as before stated, were no wider than usual.

CASE II.—Mrs. W., Irish; aged 23; domestic; primipara; very short, and of a stout build. Was first called to her on the evening of Jan. 26th. Slight labor pains had come on a few hours previous. On vaginal examination, the os was found to be about two thirds of an inch in diameter, soft and elastic, the head high above the brim, scarcely within reach of the finger. As she was evidently in the commencing stage of labor, I left, with directions to be sent for when the pains were more urgent.

Jan. 27th.—Was called very early in the morning, and went immediately for a student, with whom the case was left in charge. In the evening was called again. The pains had continued somewhat irregularly throughout the day; the os had increased a little in size. The exact position of the head was not made out. The vagina was moist; bowels had been freely moved from oil taken in the morning; urine had been voided. Pulse good. As everything appeared favorable, I left, telling the student to call me if he thought it necessary.

I heard nothing more of the case until the 29th, at 4, P.M., when the gentleman said he would like to be relieved. From him I learned that the pains had been irregular the day before, until 5, P.M., when the membranes ruptured. From that time they had been regular and expulsive. On vaginal examination, the os was found about double the size of a Mexican dollar, very soft and elastic, and but loosely enveloping the head, which still remained, as previously described, above the brim. The head was very hard and unyielding, and was soon recognized as the cause of the delay. The vagina was hot and dry; bladder much distended. The catheter was used, and about a pint of urine drawn off. After this, the pains, which had all day been good, seemed to assume, if possible, renewed intensity.

9, P.M.—Uterus still acts well. No progress has been made, and the woman shows signs of exhaustion. Headache; abdomen tympanitic; pulse 100. I began to think of the forceps, and although the condition of the head rendered their use of doubtful propriety, it was thought best to make a trial, and if found impracticable they were of course to be abandoned. Dr. Coolidge was sent for, and after an examination we concluded to apply them immediately. The woman having been placed in the usual position, many ineffectual efforts were made. They were introduced easily, but all attempts at locking them were of no avail, and after an unusually long trial they were given up. As the patient showed no urgent signs for ac-

tion, we waited. At 12 o'clock the pulse was a little over 100; the whole surface covered with profuse perspiration; vagina becoming hotter. On examination over abdomen, no signs of foetal life could be detected. At 3, A.M., administered a full dose of opium, and left her.

6, A.M.—During absence has slept considerable, the uterus acting but feebly until now; the pains were nearly gone. The forceps not being applicable, two methods of procedure remained—turning, and embryotomy; the former of very doubtful propriety, as the membranes had been ruptured thirty-six hours, and provided version could be performed, it would be unsafe to force so unyielding a head through the vagina. Craniotomy was therefore decided upon.

7, A.M.—Pains very feeble; vagina intensely hot and dry; pulse 114. A full dose of eth. tr. ergot having been given, the woman was placed in the usual position. This accomplished, the scissors were carried up to the parietal bone. Great force was used before it could be perforated, and then not until they were applied in several different places; they were finally carried to the base, and the brain well cut up. The head showing no tendency to collapse, a second puncture was made, with no better result. A trephine was now used, and a disk of bone, of considerable size, removed. By the aid of one blade of a pair of bone forceps, the opening was enlarged until both could be inserted, and the rent increased by separating them. Fragments were brought away until the opening was large enough to admit the finger, when much of the brain was removed, but unattended with any diminution in the size of the head. An hour or more was thus spent in bringing away such pieces as could be grasped by bone forceps. The greater part of the frontal and one parietal bone having been removed, the edges of the remaining bones were covered with the scalp. Not succeeding with traction, the hand was introduced, the fingers made to embrace the neck, and after a long effort the child was delivered. The placenta, which for some time had been detached, was immediately withdrawn. The delivery was attended with only the usual amount of hæmorrhage. On examination of the os, a tear of about half an inch in length, and several smaller ones, could be distinctly felt.

11, A.M.—Has rallied well; after-pains are good. A full dose of opium was given, when she was left comfortable.

31st.—Passed a good night; slept well. Pulse 80; vagina very hot; external genitals much inflamed and swollen. Nymphæ show a few patches of commencing ulceration. Abdomen full and tympanitic. Unable to void urine; passed catheter; ordered hop fomentations to bowels; beef-tea and gruel *ad libitum*; perfect rest; laudanum at night, if necessary.

Feb. 1st.—Had a good night's rest. Did not take opiate. Says she feels well; no headache; abdomen continues very tympanitic.

nitic; slight tenderness on deep pressure over uterus. Has voided urine. Skin warm and moist; lochia abundant; pulse 76.

2d.—Another good night. Skin moist; breasts active; lochia foetid; pulse 100, accelerated from excitement, there having been a disturbance in the room. Ordered a vaginal injection of warm water; broth and toast.

3d.—Had a good night, but some headache on waking, which soon passed off. Pulse 90. No dejection since delivery. Ordered ol. ricini and ol. terebinth.

4th.—A good night. Has had a free dejection. Abdomen less tympanitic; pulse 86.

5th.—Pulse 84; improving generally. 6, P.M.—Called in haste; has been in great pain for several hours, caused by inability to void urine. Drew off nearly a quart.

6th.—Pulse 76; improving fast.

7th.—Eighth day after delivery. Has had steak and toast. About the house. Pulse 68. Complains of pain in the lumbar region.

I have seen her several times since; she appears quite well. The child, a male, weighed about ten pounds. The bones were unusually firm, and the skull completely ossified.

CASE III.—Julia G., aged 25; Irish; rather a delicate-looking woman; second child. Her previous labor was tedious, and forceps were used. The present labor commenced Feb. 23d, at 11, A.M. A midwife had been in attendance until I was called on the 24th, at 6, A.M. The pains had been good for the last ten hours. The membranes were said to have ruptured at 9 the evening previous. Pulse 95, weak; tongue dry and covered with a thin, brown coat; surface warm and moist; pains fair; feels exhausted. On vaginal examination, the head, with the face looking posteriorly, was found impacted high up in the vagina. The os could not be felt. The vagina was hot and dry; external genitals swollen; rectum empty, and bladder distended. On abdominal examination, no signs of foetal life could be detected. Has had copious bilious vomiting for several hours. Drew off about two thirds of a pint of urine, and administered whiskey.

9½, A.M.—Pulse 98. The head remaining the same, it was deemed proper to apply the forceps. The woman was placed upon the floor, as they had no bed. The application of the forceps was very difficult; the head was so firmly impacted as to hardly admit both blades; they were at last placed over the ears, as was ascertained afterwards. All justifiable force was used in trying to deliver, but without avail. The head was perhaps slightly advanced, but could not be made to traverse the vagina without causing serious injury to the soft parts.

Convinced of the impossibility of delivering, except by craniotomy, it was assented to, after a long pleading, if, after the expiration of an hour, no progress was made. As the child was probably

dead, the safety of the mother required that she should be delivered in the manner least likely to render convalescence tedious. Ergot having been given, the woman was placed in the usual position. The parietal bone was perforated, followed by a marked collapse of the head. The crotchet was then introduced, and the child delivered. The placenta was easily withdrawn. The child weighed about ten pounds. The head was larger than the average, the bones firm and unyielding. Over the posterior part of the sagittal suture, there was a tumor as large as a good-sized hen's-egg.

11 $\frac{1}{4}$, A.M.—Pains very feeble, but the uterus well contracted. Feels very much exhausted. Ordered whiskey. 6, P.M.—Pulse 88, weak. Had several hours' good sleep; has taken gruel and whiskey.

26th.—9, A.M.—A restless night. Abdomen much swollen and tympanitic; considerable tenderness on deep pressure over uterus; lochia scanty; external genitals much swollen; pulse 84.

27th.—A good night. Breasts full; abdomen as yesterday. Complains of after-pains. No dejection since delivery. Pulse 80. Ordered castor oil and turpentine.

28th.—A good night. Pulse 72. Had a free dejection. From this date my attendance discontinued.

RESULTS OF THE OPERATIONS FOR THE RADICAL CURE OF CONGENITAL HERNIA, REPORTED IN THIS JOURNAL JUNE 4, 1863.

BY DAVID W. CHEEVER, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

At the last meeting of the Society for Medical Improvement (Sept. 28th), Dr. Cheever exhibited to the members a boy, 12 years of age, who was operated on for congenital hernia by Wood's method, last April, and who was, to all appearance, cured. It may be remembered that of the three cases reported in the JOURNAL, one failed at the outset from ulceration of the sutures on the fifth day; the other two were progressing favorably two months after the operation. Dr. C. gave a brief abstract of their continued improvement since that time. The first case, operated on by Gerdy's method, was left, with the skin of the scrotum firmly invaginated, the testicle a little enlarged, and the inguinal canal filled with a dense deposit; there was no bulging at the internal ring. The boy had constantly played about since that time, and had *never worn any truss since the operation*. At the end of six months he was every way as well; there was not the slightest bubonocoele, and it seemed very improbable that the great thickening in the inguinal canal would ever give way again.

The second case, operated on by Wood's method, was allowed to sit up three weeks after the operation. The hernia remained up,

and there was some induration along the inguinal canal. After he had been up a fortnight, a slight protrusion was noticed at the internal ring. Examination by the finger revealed the external ring reduced in size about one half, with firm, sharp and defined edges, showing it to be the result of actual approximation of its walls. There was considerable thickening of the scrotal fascia and cellular tissue. He was advised to wear a truss with a weak spring and flat pad, for some weeks. Within a few days after putting on the truss he left it off for several days while moving about, and the hernia did not come down. It has never come down since. He wore the truss at first pretty continuously, then rarely, and for the last month not at all. Being an active boy, he disliked the truss, and shirked putting it on when he could. During the last few weeks he has done heavy work, assisting in putting in coal, &c., without truss, and with no feeling of weakness in the groin. He therefore considers himself well, and certainly seems so. When shown to the Society, the cicatrices of the operation were but faintly visible, the parts somewhat thickened, and not the slightest bubonocoele. It is now six months since the operation.

These cases were operated on with silver wire, and Dr. Wood now gives that the preference over silk or hempen sutures. The instrument used was not unlike an aneurism-needle, somewhat sharpened, and with the eye at the point.

Dr. C. also alluded to the excellent monograph on Hernia, recently published by Dr. Wood, in London.* This is profusely illustrated; and by this means the author makes clear—what is always so difficult to make out from descriptions—his method of operating for the cure of rupture. Dr. Wood gives the result of his operation in sixty cases. There was but one death, and that from pyæmia. There were 42 cures, or about 70 *per cent. of successful cases*. Some of these cases were in children, but many in adults. Some of the latter worked as sailors, coal-heavers, dock-laborers, &c., without trusses, one year after the operation. This method has also the advantage of rendering a truss more efficient, even if it does not cure the hernia by the operation itself. For it draws the walls of the canal together, instead of spreading them open by invaginated skin, or by plugs, as other methods of operating do. In his work Dr. Wood has introduced many modifications of his operation, according to circumstances. But the essential principle is the same, viz.: *to close the inguinal canal by approximation and inflammatory adhesion of its walls, both the rings being also drawn together*; and this certainly seems the most reasonable method of attempting a radical cure.

* "On Rupture, Inguinal, Crural and Umbilical; the Anatomy, Pathology, Cause and Prevention; with new Methods of effecting a Radical and Permanent Cure. By John Wood, F.R.C.S., &c. London. 1863."

POISONING BY VANILLA-ICE.

Translated for the Boston Medical and Surgical Journal from the Allgemeine Wiener Medizinische Zeitung.

At the session of the Imperial and Royal Society of Physicians, on the third of July, Prof. Schroff related a case of poisoning by this substance, which was of all the more interest from the fact that a similar poisoning had recently taken place in Vienna, which had affected a person of high standing, and which had been several times mentioned in the public journals. Some years ago, at a time when sporadic cases of cholera were of frequent occurrence in certain portions of Vienna, a similar case of poisoning by vanilla-ice happened in the Imperial Opera.* The thorough investigation which was instituted at that time was followed by no result. Both the mode of preparation and the ingredients of the ice, in the celebrated shop in which it was prepared, were found to be free from all fault, so that no trace of the origin of the poison could be detected.

About eleven years ago, a similar case of poisoning was much talked of. At that time, also, the investigation of a commission, appointed by the Minister of the Interior expressly to examine the case, was of no avail. This want of any positive cause of the symptoms, among which vomiting and pain in the gastric region are the most prominent, led Schroff to the idea, that the evil effects of the vanilla-ice might perhaps be connected with the mode of treatment of the vanilla pods on the part of the cultivators in South America and Mexico, before becoming an article of commerce, an hypothesis which is highly probable. In order to preserve these pods in a soft and pliant condition, the producers are accustomed to rub them with various oils, among others with Acajou oil. This is prepared from the seeds of the *Anacardium occidentale* or *orientale*, which is enclosed within a nut-like receptacle. The oil itself, when pressed from the pure seed, is of the finest sort, but the receptacle, which has several cavities, contains a resinous fluid, which being rubbed upon the skin, produces, in the same way as cantharides, burning and vesication. Degener, who has prepared two kinds of ethereal oils from this resin, calls the stronger cardol vesicans, the weaker cardol irritans. Schroff, by rubbing this oil upon himself, had an opportunity of proving its vesicating properties. Now it is easily possible for the inhabitants, in preparing the Acajou oil, to contaminate the kernel with the above acrid fluids, if they do not open the seeds with proper care. In case now that the vanilla is rubbed with an Acajou oil thus contaminated, it will be easily understood how its use might produce symptoms of poisoning.

Still another explanation of the poisoning might be possibly found in another circumstance; namely, in a certain kind of crystal in the vanilla fruit itself. Schroff gave a detailed phytographical descrip-

* It is the custom in Vienna for servants in livery to offer the ices, for which that city is so famous, to those who choose to buy between the acts at the Opera House.

tion of the *Silqua Vanilla*, both in its mercantile and pharmaceutical relations. The best variety, the Mexican *Vanilla sativa*, has its upper surface sprinkled with numerous white acicular crystals, composed of benzoic and tonka acids, and on this account the inferior qualities are rolled in benzoic acid in order to give them a better appearance. The microscopic examination of the pods themselves has revealed the following structure. The superficial layer or epidermis consists of cells and cell-nuclei, and in it Schroff discovered broad octahedral crystals, which are simply oxalate of lime. After the epidermis comes the parenchyma, which consists of two layers, one colorless, the other brownish red, in the former of which masses of crystals, with elongated angles, were likewise found. In the deeper layers we arrive at the cells and glands, which secrete the volatile ethereal oil, as well as the resin. With regard to the prismatic crystals above mentioned, it is to be observed that they possess a particular resemblance to those found in the scilla, which, being rubbed upon the skin, produce burning and vesication. This same property is said to belong to these crystals of vanilla when collected and dissolved in water, although according to the opinion of Schroff they consist of oxalate of lime only, like the octahedral forms. On the other hand, in Paris, where the cultivation of vanilla is industriously carried on in the gardens, it is maintained that the acrid substance is situated in the prismatic crystals. If this is really the case, it is conceivable that symptoms of poisoning might arise from the use of vanilla-ice if an excessive quantity of such crystals were present. Schroff believes, however, that of the two hypotheses the first is more probable than the latter.

ON INHALATION OF NITROGLYCERINE.

BY JOHN M. MERRICK, JR., WALPOLE, MASS.

VARIOUS experiments have been made by different observers* upon the action of nitroglycerine or glonoine upon the animal economy—the nitroglycerine, or its solution in alcohol, being administered by dropping it upon the tongue—the effects which have been noticed being generally acceleration of the pulse, headache and prostration, and in peculiarly susceptible persons, these symptoms greatly aggravated.

These experiments, though somewhat contradictory, are very interesting, both from a chemical and toxicological point of view, but do not touch upon one matter, viz.: the effects of the inhalation of the vapor of glonoine—a subject to which considerable interest must attach itself when we consider the rapidity with which the symptoms develop themselves when only a fraction of a drop is placed on the tip of the tongue.

* Vide Braithwaite's *Retrospect of Practical Medicine*, Part xxxvii., p. 294.

In preparing a quantity of nitroglycerine in 1859, I met with an accident, the result of which exhibits in a very marked and satisfactory manner the toxical properties of this curious substance, and shows the necessity for extreme caution in handling it, especially when mixed with a volatile and inflammable solvent, as alcohol or ether.

The nitroglycerine was prepared by allowing pure glycerine to drop from a pipette with a glass stop-cock, so adjusted as to allow from fifteen to twenty drops to fall in a minute into a mixture of equal volumes of the strongest nitric and sulphuric acids cooled by very cold water.

In repeated experiments I have found that, in spite of the precautions taken to cool the acids, it is impossible to avoid an accident now and then, since, when the action reaches a certain intensity, just as in the oxydation of uric acid or cotton, the experiment ends in an explosion or a violent evolution of nitrous fumes. When such a result occurs in making glonoine, the bystander seldom escapes a severe headache, even though the experiment be conducted in the open air.

After glycerine equal to half the bulk of the mixed acids had been dropped in, the whole was thrown into a large volume of cold water, thoroughly washed, drawn off with a pipette, dissolved in ether, and the ethereal solution evaporated on a water-bath. It was in this part of the preparation that the accident occurred which enables me to speak of the consequences which follow the inhalation of the vapor. The glass dish in which the evaporation was being conducted, by some mishap tipped over, spilling half its contents on the hot copper bath, and in a moment the room was full of the mixed vapor of nitroglycerine and ether. Although I stood directly over the water-bath to adjust it, and must have inhaled a large volume of the mixed vapor, no instant bad result followed, but in less than fifteen minutes a headache set in, slight at first, but increasing in intensity by degrees, until in an hour and a half it became almost intolerable. It was accompanied by a good deal of faintness and exhaustion, intolerance of light, and a feeling of great general distress and alarm, in addition to the racking pain. Relief was only obtained at length by the inhalation of a large quantity of ether, the insensibility produced by which was followed by broken and disturbed sleep, lasting until the following day, which was marked by weakness, exhaustion and slight headache. These unpleasant symptoms did not finally disappear for three or four days.

It may be remarked that, during all the time that the severe pain and distress lasted, consciousness was never lost for an instant. In Mr. Field's case,* *two drops* of a solution containing only one drop of glonoine to ninety-nine of rectified spirit produced loss of consciousness and other very alarming symptoms of narcotic poisoning.

* Vide Braithwaite ut supra.

The effects of glonoine upon different individuals are exceedingly different and contradictory. Two drops of a diluted solution containing only one drop of nitroglycerine in ninety-nine of alcohol produce alarming symptoms of poisoning in one person, while another swallows two hundred drops of a similar solution with no other ill effects than a slightly "muddled" feeling in the head. I have experienced unpleasant feelings from tasting exceedingly minute quantities of *pure* nitroglycerine, such as headache, buzzing in the ears, with a feeling of nervousness and depression, although the action of the drug does not seem to be nearly so powerful or so rapid as when given in the form of alcoholic solution. Pure nitroglycerine is volatile at ordinary temperatures—a fact which was accidentally discovered in drawing off with a mouth pipette some nitroglycerine which had just been washed with water. Headache and the usual symptoms immediately set in, though not a particle of the liquid touched my mouth or tongue.

The following experiment, which shows that some constitutions are susceptible to the action of only one fortieth of a drop of glonoine, was made with a solution of nitroglycerine containing two and one half drops of the pure substance to ninety-seven and one half of alcohol. The solution was dropped upon sugar, and the sugar allowed to dissolve on the tongue.

My general health being good, and my pulse being seventy-nine, about two and one half hours after a full meal, I took *one* drop of the solution. In two minutes my pulse was ninety-four, with dull, throbbing headache; in five minutes the pulse was one hundred, the headache changing from the back to the front of the head; in ten minutes the pulse was down to eighty-eight, and in fourteen minutes back to its normal rate, seventy-nine, although the headache did not wholly pass off for fifteen minutes more. It will be noticed that a quantity of the solution was taken, equal to only one fortieth of a drop of pure nitroglycerine.—*American Journal of Science and Arts.*

ON THE FORMATION OF MUCUS AND PUS.

BY THOMAS K. CHAMBERS, M.D., HON. PHYSICIAN TO H.R.H. THE PRINCE OF WALES,
PHYSICIAN TO ST. MARY'S AND THE LOCK HOSPITALS, &c.

IN the vitalized forms which they present, we may consider pus and mucus as identical; the pus-globule being merely the descendant, more or less remote, of the mucus-globule, and both retaining only that low degree of life which they originally derived from the body. The physical differences between the two depend seemingly upon the medium in which these vitalized forms are suspended. Neither in pus nor mucus are the contents of this medium constant in their proportion to one another; no two analyses of pus or mucus are ever the same.

Indubitable pus and indubitable mucus may be clearly defined as the two ends of a scale, between which there are innumerable gradations. The most transparent, stringiest, and least globular mucus consists principally of a peculiar animal matter, which is not albumen, though it closely resembles it. It is not coagulable by heat, and it contains more oxygen on ultimate analysis than albumen does. Sulphur also appears not to be one of its constituents. Until it can be found reducible to be considered a compound of some known intermediate substances, it is temporarily called "mucin." This word simply means mucus divested of those contents which are capable of another nomenclature and physical separation—as, for instance, epithelium-scales, blood, the ammonia of decomposition, &c. The analyses are well known, being reprinted in every work of physiological chemistry, but shed little light, for the obvious reason that the substance analyzed is hardly ever twice the same.

Pus, on the other hand, contains a large quantity of albumen and a large quantity of fat. A modification in the mode of the loss of health is characterized by the presence of fibrin, and certain forms of defective vitality by casein being found. The inorganic constituents of both seem to be the same as those of blood-serum with some of its water lost. Our diagnosis, then, of the morbid secretions of the mucous membranes should not be absolute—not that such and such a specimen *is* pus or *is* mucus—but comparative, that it is *more or less* purulent, according as it exhibits a greater or smaller quantity of albumen; a fact easily ascertained by the degree of its coagulation by heat when diluted with water. And this is thoroughly practical and important, for it indicates the degree of loss of local vitality in the secreting membrane. Equally practical, also, and important is the observation of the presence of fibrin and its amount. In large and overwhelming quantities we are familiar with it as occurring in the most serious deficiency of life consistent with life at all which we find in mucous membranes; and there appears even in minor cases a close connection between its amount and the degree of deficient vitality or inflammation. During a severe cold in the head minute clots of spontaneously coagulating fibrin may be found in the secretion of the Schneiderian membrane, which, existing in large quantities, form the false membrane indicative of the serious poisoning of the system in diphtheria and croup.

The phenomena we see on the mucous membranes are a question of degree rather than of essential difference.

Loss of vitality, as shown in mucous membranes, seems to be exhibited in the following degrees.

First, there is an *arrest of function*. For example, from the impression of cold the Schneiderian membrane is temporarily deprived of its endosmotic force; it ceases to absorb the water which is condensed on its surface from the breath, and that water drips from the nostrils. Or the stomach or intestines, from mental or physical

causes, are deprived of their power of absorbing and digesting the fluid matters presented to them, and partially first excreted from them; and these fluids may pass away by diarrhœa. Or the skin is chilled, and shows its deficient vitality chiefly in the deficiency of its most prominent function; though it feels painfully, it cannot feel so delicately as it ought. In a vigorous person full life is soon regained; the nose recovers its natural degree of dryness; the intestines absorb again before the fluids have passed from the body, and the temporary indigestion does not arrive at diarrhœa; the skin recovers its feeling after a temporary painfulness. But we know that our invalid patients, whose vitality is low, are not so easily reinstated. Catarrh of various parts quickly and readily follows the action of physical agents. It is probable that in this least degree of injury the capillaries are contracted in area, and consequently the rapidity of their stream increased, by the action of the nerves. This phenomenon is wanting if the injury is greater; in experiments upon animals the microscope does not detect it, if the reagent applied is powerful.

2. A greater degree of injury is accompanied by a loss of elasticity in the capillaries. Their dilatation, and the consequent retention and stagnation of the blood in them, is familiar to us all, in both the living and dead subject, as "*inflammatory congestion*."

3. This stagnation may be in isolated spots complete; the blood-discs adhere together in rolls, as when removed from the body, and block up the passage. Thus the arterial wave is obstructed in its course, and like an ocean-swell shattered against a shore of rocks becomes more evident to the senses as the well-known "*throbbing*." It is shortened and sharpened, but there is no evidence that it is strengthened; indeed, the analogy I have cited, and the general fact of weakness being accompanied by quickened pulse, would seem to show that it is diminished in propelling force.

In the mean time there is an accumulation of that constituent of the blood which most resembles in appearance the element of young growing tissue—the colorless blood-corpuscles. The blood is dark, indeed, to the naked eye, but under the microscope is seen to be made dark by being filled with these pale bodies, possessing a high refractive power.

The loss of elasticity in the coats of the capillaries renders them more easily permeable by the contained fluid. Serum is poured out into the neighboring parenchyma, and joins with the swollen capillaries in producing "*swelling*." The loss of vitality in the blood-discs may be so complete that their hæmatin is dissolved in the serum, and we get the surrounding parts stained with it—as for a short time in typhus fever, and for a long time in syphilitic eruptions. Or the bloodvessels may completely lose their cohesion and be ruptured, allowing of hæmorrhage. But in all this there is no new process, nothing which is not a direct deficiency of function.

In solid structures this effusion is followed by an endosmotic current of the watery part back again into the circulation, leaving behind it the more solid and coagulable constituents. On free surfaces, covered only by soft open epithelium, the water and salts therein dissolved escape, forming the fluid of the mucus. The elements of new tissue, being there very copious to supply the constant demand for growth, ooze out copiously with the serum, and constitute the mucous globules. They are wasted elements of new growth, not themselves a new creation, or evidences of superadded life.

How do these matters get through the coats of the capillaries? There cannot be holes for their escape, or the blood-discs, which are the smaller of the two, would always escape also. Doubtless this is one of the great riddles of physiology. But I think the art of drawing is in a certain degree responsible for some of the difficulty which it presents to our minds. When we have no means of correcting by our other senses impressions made on the eye, we are too apt to consider everything with an outline as equally solid. The necessarily hard outlines of the engraver express to us forms which may, for all we know, be spheres of cast iron, whereas in truth they are as delicate as aerial clouds. Why may they not pass through tissues, mutually dissolving and dissolved by the materials of those tissues? Just as we see a stratum of fleecy cloud among mountains, or in Turner's pictures, disappear when it comes to a stratum of warm air, and reappear in the same form when it emerges on the other side. To get just ideas of nature, we must look upon solidity as a comparative, not as an absolute, quality.

4. In a higher degree of deficient vitality the serum contains albumen and fat also exuded with it; and this mixed with the multiplied globules constitutes the fluid we call "pus." The albumen and fat not only escape on free surfaces, but saturate also the tissues they escape through, making them more retentive of water than would otherwise be the case. Inflamed cuticle takes a much longer time to dry than normal cuticle. Langhans found that a piece of healthy rabbit-skin was dry in three hours, but a piece of the same which had been inflamed during life took twenty hours to part with its moisture to the same extent. Thus it appears to be saturated with the nutriment which it has lost the power of employing aright.

5. Pus formed as I have described is a soft, greasy liniment, which tends probably to shield the parts with which it lies in contact from foreign influences, which in their condition of lowered vitality would be noxious to them. It is more bland and less liable to decomposition than any artificial application. Kept on the healthy skin it causes less irritation than even water. But under certain circumstances it becomes what we term *ichorous*. In this state it is corrosive, poisonous, and destructive to the neighboring tissues. Now, this cannot arise simply by the chemical decomposition of

the pus itself in consequence of retention, because in a good many cases (as in cancrum oris, for example) it has not been retained so long as usual, but is thrown off ichorous and irritating as it is formed. But you may observe that in all these instances of ichorous pus there is necrosis, mortification, ulceration, or some other form of actual loss of tissue. Tissue may be forming as in granulations, but it is being destroyed at the same time with abnormal rapidity. I cannot but think, therefore, that the ichorous nature of such pus may be due to its saturation with the organic acids which are the results of the decomposition, not of the pus itself, but of the melting tissues. Wash away this irritating pus, clean the sore, and that which is then formed often is quite bland and benignant. As pus differs from mucus, so ichor differs from pus in the nature of its accidental fluid constituents.

The formation of ichorous pus exhibits a further stage of loss of vitality. The poisonous part of it seems to be peculiarly soluble, and capable of uniting with, and destroying, animal tissues. Absorbed into the blood, it naturally destroys the vitality of the constituents of that fluid, causes it to coagulate in localized spots, and thus to give rise to the congestions and abscesses of pyæmia. When we reflect how easily ulcerations may arise in mucous membranes, and what an active surface they offer for absorption, we cannot be surprised at the frequency with which pyæmic abscesses follow slight injuries, such as operations on the bladder, crushing of calculi, typhous inflammation of the bowels—cases which seem of minor moment, but which certainly involve solutions of continuity, with consequent decomposition of tissue and the formation of ichor, in a situation very open to absorption.

6. The formation of fibrinous coats on mucous membranes I have already shown not necessarily to involve destruction of the epithelium. Is the loss of vitality which causes it to exosmose through the capillaries in the fibrin itself or in the walls of those vessels? Whichever it may be, such an exudation certainly is evidence of a great deficiency of life; and, moreover, by the mechanical impediment it throws in the way of the functions, usually leads to further deficiency.—*Lancet*.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 8, 1863.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK FOR 1863.—The Annual meetings of the New York State Medical Society seem to be mainly devoted to the reading of papers by the various members, rather than to the discussion of questions of medical ethics, or the cultivation of a friendly intercourse and the maintenance

of a high standard of professional character. These important objects are, of course, not overlooked, but the more strictly scientific exercises, so to speak, of the occasion, seem to predominate. We have, therefore, as the fruit of these meetings, an annual volume of Transactions, made up of the communications presented, all apparently being published which are laid before the Society on these occasions. To us there seems no special reason for giving the patronage of the Society thus indiscriminately, merely because a paper has been read. The result is a volume of very various character, of materials of very unequal merit. Such is the volume of the present year, which contains many valuable and interesting papers, it is true, but some, which, in our judgment, would have found a more appropriate place in the pages of some of the medical journals. The transactions of a State Society should, we think, be mainly a record of the progress of medical science in the State during the year.

Of the forty-eight articles which make up the volume before us, all but the last eight are papers laid before the Society, the remainder being the record of the Annual Meeting, with various lists of members, &c.

The first article is the Annual Address of the President, Dr. Thomas Hun, on the degree and kind of influence which the progress of medical science during the present century has exerted over medical art. This is a sound and reasonable discourse, and exhibits a most just appreciation of the proper objects and limits of our art. Beginning with a cursory glance at the principal discoveries in medical science during the present century, the author proceeds to unfold and enforce the true doctrine of rational medicine as it is held by the leading minds of the profession at the present day, and which has indeed had its advocates from the earliest ages. In this connection he justly recognizes the influence of one of our most honored professional brethren here, in presenting its claims with new power to the profession of the present generation:—

“Within the last twenty-five years,” he says, “this view has been revived with more precision of statement, and has derived support from the progress of pathology and of the natural history of disease. A remarkable essay on self-limited diseases was published by Dr. Bigelow, in 1835, which may be considered as the starting point of medical reform in this country, and since that time similar views have been advocated by Dr. Forbes, Dr. Holmes and others. In this essay, I have not so much the hope of adding anything material to the truths inculcated in those writings, as of presenting them in a somewhat different light, and thus reaching some minds which have not yet adopted them. Truths like these need not only to be stated, but also to be preached.”

The author goes on to illustrate from some of the simplest processes in surgery the operations of the *vis medicatrix nature*, showing just how far the surgeon is able to assist these processes, and applying the same principles to the management of the more hidden operations of disease. We give his conclusion in his own words:—

“We are, after this long discussion, prepared to answer the question proposed in the commencement, what has been the influence of the progress of medical science on medical art? If by medical art we understand the employment of means for prolonging life, guarding against diseases, alleviating pain, and conducting diseases to a safe termination, then we may safely assert that its progress has been most satisfactory. But if by medical art we understand the power of arresting or curing diseases, then we must admit that its progress has been utter-

ly insignificant. The list of incurable diseases is longer now than it was a century ago, for medical science within that period has served rather to demonstrate the incurable organic lesions, on which many diseases depend, and to show how those diseases which are not of a mortal character pursue a determinate course and have a definite duration, than to furnish remedies; and hence it is that the study of pathology has a tendency to impair confidence in the power of medicines over the course of disease. Indeed the great practical advantage derived from modern science, lies precisely in the demonstration it affords of our inability to cure diseases, and of the irremediable nature of the lesions on which many diseases depend. By showing the necessary limits of our art, and the objects which are attainable, it saves us from vainly striving after impossibilities, and from neglecting the good we might do, and has thus placed the art on a sure foundation, and opened for it a career of indefinite improvement. As in the old fable, the sons who sought in the garden for the treasure promised by the father, failed to find what they looked for, but were enriched by the work they had done in turning up the soil; so our art has failed in its search after remedies, but in the course of the search has attained the object sought for, in another way."

The remainder of the discourse is devoted to sustaining the conclusion thus set forth. This is done in a most satisfactory manner, inspiring the reader with the fullest confidence in the author as a truly wise physician, who has learnt to place a very just estimate upon the proper position of the profession and the limits and scope of our art. The style of the address is very agreeable; it abounds in practical and pertinent illustrations, and cannot fail to be read with interest by all under whose notice it may fall.

The second article is an excellent paper on Hospital Construction, by Dr. Charles A. Lee. Its object is to show the great superiority of pavilion hospitals over all others. This is the plan now so extensively adopted in the United States Military Hospitals, with such good results. The paper is illustrated by ground plans of a number of the best modern European hospitals.

Passing over a paper on the Mechanical Treatment of Pott's Disease, by Dr. C. F. Taylor, which, however interesting it may be, has no special claim of novelty to recommend it, we come to one by Dr. E. S. F. Arnold, on Medical Provision for Railroads, being supplementary to a paper on the same subject presented by the author last year. We have already noticed somewhat at length the author's commendable efforts to bring about some action of the New York Legislature, by which such provision may be efficiently made. The great State to which that body gives its laws presents in the annual statistics of its numerous railroads such a fearful exhibition of loss of life and limb by railroad accidents, that one can only wonder that no such provision has been made long before this. Dr. Arnold recommends the organization of an association of the railroad companies of the State, which shall make up a guarantee fund of 100,000 dollars—

"Chargeable upon each road as to its passenger traffic; and to enable the association of railroads to meet casualties, the respective companies shall in their discretion be allowed to charge four tenths of a mill per mile to each passenger, or one cent for every twenty-five miles or distance within it, in addition to the usual fare. In return for this, each passenger is guaranteed, in case of death, \$5,000 to his heirs; in case of loss of a limb, or an incurable injury seriously interfering with usual occupations, \$5,000, and for minor injuries \$25 per week, provided that such payments shall not extend over fifty-two weeks. The association also undertakes to establish surgical stations, at distances of not over ten miles from any one spot, which shall be provided with suitable necessities, and to appoint competent surgeons to attend them when required. This done, the railroad com-

panies are to be exempted from all liability on account of any accident to passengers."

To say nothing of this plan as a measure of humanity, by which the most prompt and effectual relief may be brought to the sufferer, Dr. Arnold clearly shows that as a measure of economy, by saving heavy damages at law, it strongly commends itself to the interest of railroad proprietors. As yet, we believe, the attempt to get a satisfactory bill through the legislature has failed. We hope Dr. Arnold will persevere in his efforts, and thus earn the credit of inaugurating a system which will not be slow in securing universal favor and adoption throughout the States.

Article VII. is an account of a new operation for Artificial Hip-joint in Bony Anchylosis, by Dr. Lewis A. Sayre. The history of two cases is given, in which the operation was crowned with success. It consisted in the ingenious removal of a section of bone from near the head of the femur, successfully removing the deformity and inconvenience of the anchylosis, and giving each patient a false joint instead. The paper is illustrated with a number of wood-cuts, and is a very valuable contribution to plastic surgery.

Article VIII. is made up of a series of documents, correspondence, &c., and the report of Dr. John Swinburne to Gov. Morgan, on his professional experience in the disastrous peninsular campaign. This is a most painful picture of the gratuitous suffering of the unfortunate wounded of our army who fell into the hands of the enemy during the terrible battles before Richmond, caused by the inhuman conduct of their captors. It is a black page in the history of the war, which is so full of records of the odious cruelty of the enemy with whom we are contending. The author also speaks of the surgical practice which came under his eye, and makes some excellent suggestions for securing the most efficient and skilful professional agency on the field of battle. This communication concludes with a valuable paper on Resection of Joints and Conservative Surgery, of some thirty pages, which want of space compels us to dismiss with the simple mention of it.

Passing over several papers worthy of notice, but which we are obliged to neglect, we come to a new method of treating club foot by plaster of Paris bandages. We must not omit, however, to thank Dr. Henry S. Downs, the author of paper No. XIII., for the heading of it. *Post-pharyngeal Abscess*, instead of *Retro-pharyngeal*, as is commonly written. The former seems to us to be unquestionably the more correct reading.

To return to the paper on Club Foot. This contribution is from Dr. Dewitt C. Enos, and gives a very ingenious application of the plaster of Paris bandage to the treatment of club foot, by which a radical cure is effected without any division of tendons. In a few words, the method employed is this: Strips of muslin are prepared, long enough to extend the whole length of the tibia and beneath the heel to the end of the toes, and nearly wide enough to embrace the whole limb. Five or six such strips are laid one above the other, with alternating layers of plaster of Paris, mixed with warm water to about the consistency of cream. These are applied behind the leg and beneath the foot, the edges being brought up on each side towards each other. A roller is next applied from the toes to the knee and back. The foot is then for-

cibly grasped and brought as nearly as possible to its normal position, and held there until the plaster sets. The process must be renewed from time to time until the foot is brought into the natural position. The paper is illustrated by several successful cases, and a good lithograph shows a very satisfactory condition of a limb which had been much distorted before the application of the bandage.

Article XX. is a history of two cases of Ovarian Dropsy successfully treated by iodine injections, by Dr. D. G. Thomas. Article XXIII. is an account of a very singular Gangrenous Affection of the Mouth and Fauces, observed at the U. S. Marine Hospital, New Orleans, by Dr. Rufus K. Browne, Surgeon in charge. No. XXXIV. is the communication from the Massachusetts Medical Society on the want of an ambulance system in the Army, and contains Dr. Bowditch's paper on this subject, read before the Boston Society for Medical Improvement. The subject was referred to a committee of the New York Society, in accordance with whose recommendation the Legislature passed a bill appropriating two hundred thousand dollars for the additional care of the sick, wounded and indigent soldiers. Article XXXVI. gives a complete list of all the regimental surgeons of the State of New York in the war of the rebellion. Notices of deceased members of the Society, with the record of the fifty-sixth annual meeting, &c., conclude the volume. We have been obliged to pass over a number of interesting and important papers for want of space to notice them. The whole volume is a valuable contribution to medical literature.

A word about the mechanical execution of this volume. It could not be much worse. The shabbiness of the paper on which it is printed may be accounted for, we suppose, by the fact that it is published as a Legislative document. This is a poor excuse; the members of the Society had better put their hands in their own pockets and pay for its publication themselves, rather than allow such a mean dress to cover such a worthy body. It would be well to hire a proof-reader also to correct the press. Never have we seen a medical publication so full of egregious blunders. Hardly a page can be turned without several such meeting the eye. Without any malicious search we find "illacus," "asterphytes," "gracillis," "tensor vagina femoris," "pectineus," "elurnated," "cordeia," besides various transpositions of letters, all in one paper. On another page, "facia lata" and "minnie" balls. On another, the phrase "adventition substance" occurs twice, "tendo Achilles" ditto, and, turning over, "atrophed" and "hypertrophed" appear in the same line, the former repeated below; "gastroanemii," "os calis." On the opposite page, "spinallis," "hemiscephalus," and so on. A paper on a case of prolapsus uteri has the latter word printed "utero" in its very title, in the second line "procidenta utero," and again "os utero." And so we might go on and fill a page with such blunders. We see "cerrix uteri" in one place, "squalæ of diphtheria" in another; also "exsiccatum, alumnæ," "abraïd," "aneastheasia," "subphænaed." "*Panetis*" of the chest we confess puzzled us; and it was only after some reflection that we discovered it stood for *parietes*. The friends of Dr. Brown-Séguard will thank us, we hope, for suggesting that he is probably the gentleman referred to on page 84 as Dr. Brown Lequaree! Let us hope that another year the Empire State will not be so meanly represented in a

document which is intended as an annual record of the progress of medical science within her borders.

DEATH OF DR. GEORGE HAYWARD.—While the meeting of the Councillors of the Massachusetts Medical Society was in session yesterday, Dr. John Jeffries announced the sudden decease, within an hour, of Dr. George Hayward, of this city, by apoplexy. The abruptness of this announcement produced a profound impression upon the gentlemen present, many of whom were among Dr. Hayward's old friends and associates. A committee was at once appointed to recommend some action on the part of the Councillors in view of this sad event. After consultation, the committee reported as follows:

The committee appointed to consider what order should be taken in relation to the announcement just made by Dr. Jeffries of the sudden death, since the opening of this meeting, of Dr. George Hayward, former President of this Society, and for a long series of years an active and efficient member, recommend, that a committee be appointed to adopt such measures as may, on consultation with Dr. James Jackson, Dr. Jacob Bigelow, Dr. John Ware and the officers of this Society, and such others as they may please to consult, seem appropriate to this sad occasion.

The report of the committee was accepted, and its suggestions unanimously adopted. Drs. Dalton, Jeffries and J. Mason Warren were chosen a committee to act in accordance with its provisions.

THE annual meeting of the Vermont Medical Society will be held at Montpelier on the 14th and 15th of October.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 3d, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	61	46	107
Ave. mortality of corresponding weeks for ten years, 1853—1863,	44.0	42.0	86.0
Average corrected to increased population	00	00	94.25
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
18	4	1	5	1	4	4	13

DIED,—In this city, Sept. 30, Dr. S. Hamilton Keep, aged 30.

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 3d, 107. Males, 61—Females, 46.—Abscess (abdominal), 1—accident, 2—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 2—bronchitis, 1—cholera infantum, 13—consumption, 18—convulsions, 2—croup, 4—debility, 1—diarrhoea, 8—diphtheria, 3—dropsy, 2—dropsy of the brain, 3—dysentery, 4—epilepsy, 1—exhaustion, 1—scarlet fever, 1—typhoid fever, 4—disease of the heart, 3—infantile disease, 1—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 7—old age, 2—peritonitis, 1—premature birth, 1—enlargement of the prostate gland, 1—suffocated (overlaid), 1—smallpox, 1—unknown, 5.

Under 5 years of age, 49—between 5 and 20 years, 11—between 20 and 40 years, 24—between 40 and 60 years, 10—above 60 years, 13. Born in the United States, 74—Ireland, 24—other places, 9.

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BOSTON MEDICAL AND SURGICAL JOURNAL.

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THURSDAY, OCTOBER 15, 1863.

No. 11.

RADICAL CURE OF CONGENITAL INGUINAL HERNIA.

[Read before the Boston Society for Medical Improvement, Sept. 28th, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY DAVID W. CHEEVER, M.D.

ABOUT six months ago I operated on three cases of congenital inguinal hernia, with a view to attempt a radical cure. All were boys of from eight to twelve years of age. One case failed at the outset, ulceration having taken the place of the adhesive inflammation which was hoped for. The other two succeeded; and are thus far, six months after the operation, well. I should have preferred to wait until a year had elapsed before bringing these cases to the notice of the Society; but finding that one of the cases had moved away from the city, and fearing to lose sight of the other, I have brought him here to-night, to show the result of Wood's operation, and will exhibit him to the Society. Before doing so, it may be best to read a short account of the operations. The boy who has moved away was operated on by Gerdy's method; the other, by that of Mr. John Wood, of London, which consists in placing subcutaneous sutures around the inguinal canal.

CASE I.—Daniel S——, a healthy boy, eight years of age, has a congenital inguinal hernia on the right side, as large as a hen's egg, when in the scrotum. The ring admits the fore-finger with ease. The cord, testis and spermatic plexus of veins are healthy. He has worn a truss, but latterly has been unable to keep the hernia up with it, and has left it off.

March 21st.—The bowels having been cleared, and the bladder emptied, he was etherized, placed on his back, the hernia reduced, and kept up by the finger of an assistant pressing over the internal ring. The skin of the scrotum was invaginated into the inguinal canal, and with the cord lying beneath the back of the finger, the inner pillar of the aponeurosis of the *external oblique* muscle and the conjoined tendon of the *internal oblique and transversalis* were raised upon the tip of the finger, about half an inch above the *pubes*.

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A curved needle armed with a silver suture was now entered over the tip of the finger from above the *pubes*, carried through the conjoined tendon, inner pillar and invaginated scrotum, and thence out below the *pubes*, where the invaginating finger was first entered. The needle was now detached, and then, threaded anew with another wire, it was entered from below, passed by the outer side of the finger through Poupart's ligament, and thence across the inguinal canal, emerging at the same point above the *pubes*, where the first suture entered. The four ends of the silver suture were then passed through two holes of a large button, and clamped pretty tightly over it. The boy now vomited and strained violently from the ether, but the hernia did not come down. He was now put to bed on his back, and an opiate administered. He remained strictly in the horizontal posture, and the wound was kept wet with cold water. With the exception of some pain and tenderness over the abdomen, accompanied with but little fever, everything went on well for three days.

March 24th.—He was given some castor oil. In the night he got up unperceived, walked to the water-closet, had a large evacuation, and sat and strained a long while. Severe orchitis now supervened, which ran a course of about a week, and then gradually subsided. It was treated with cold applications and opium. There was a good deal of purulent discharge around the sutures, and a sinus opened above the *pubes*. But the sutures held on; there was no descent of the intestine, and the testicle passed out of the acute stage. Three weeks and a half after the operation the sutures were removed. In one week more the sinuses were closed; the hernia remained up, and the scrotum well invaginated. He was now, one month after the operation, allowed to get up, and walk about the room. No truss was applied.

May 23d, *one month* after getting up, and two months after the operation, the scrotum remained firmly invaginated; the testicle painless, and about one third larger than the other; the inguinal canal filled with a dense deposit of lymph; the hernia up, and no bulging. I have seen this boy from time to time until very recently, and he has remained perfectly relieved; such is his state six months after the operation. I have very little fear of his hernia ever returning. He has worn no truss. He was kept in bed longer than the next case, which was let up too soon.

CASE II.—William M——, twelve years old, has a congenital inguinal hernia on the right side. The ring is large, admitting the thumb without difficulty. Testicle, cord and veins healthy; otherwise strong and active. Has worn different trusses that were made for him, but cannot keep it up with them. The difficulty is increasing as he grows.

April 13th.—After being etherized, and the hernia reduced and held up as before, an incision about three fourths of an inch long

was made through the skin of the scrotum of the right side, at its lower part. The fascia of the scrotum was now dissected subcutaneously from the skin, to which it adheres only by loose cellular tissue, for a space of about an inch and a half in diameter all round; or until the fascia could be invaginated into the inguinal canal, without puckering the skin. The fore-finger of the right hand being placed over the cord, and invaginating the fascia of the scrotum as high up into the inguinal canal as possible, a curved needle, with the eye in the point, and set on a firm handle, was next carried up along the finger, and made to perforate the *conjoined tendon* and *inner pillar* near the *internal ring*. The skin over the point of the needle was then drawn a little inwards and upwards, and it was made to emerge, when it was threaded with a silver suture and withdrawn, leaving one end of the wire projecting above the *pubes*. Next the finger was turned downwards and outwards beneath Poupart's ligament, pressing the cord back out of the way. The needle was next made to perforate Poupart's ligament, from within outwards, and as near the central point between the anterior superior spine of the *ilium* and the spine of the *pubes* as possible, and then, by drawing the skin downwards and outwards, the point was brought out at the same hole where the first stitch emerged above the *pubes*. Here a loop of the suture was retained, and the needle again drawn back. The finger being now turned upwards and *inwards*, and the needle following it, it was made to pierce the inner pillar and triangular ligament at the edge of the *rectus*, and again brought out, for the third and last time, through the same puncture above the *pubes*. The needle was now detached, and withdrawn with the finger. There were now left out above the *pubes* two free ends of the wire suture, which had passed through the inner pillar, one near the internal ring, and the other near the edge of the *rectus* muscle; and a loop, whose other end was encircling Poupart's ligament, at a point midway between the *pubes* and *ilium*. The loop and the free ends were now crossed, and brought through two holes of a button, and clamped firmly over it. Previous to this, however, it was found, on passing the finger into the inguinal canal, that the fascia of the scrotum was tightly drawn up into this cavity, that the cord and testicle were free, and that on drawing the wires, the sides of the inguinal canal were approximated to each other. As in the former case, vomiting now came on and failed to bring down the hernia, and the same treatment was adopted as before. There was no orchitis; very little pain; not a bad symptom; on the contrary it was feared that he was not getting up inflammation enough for a cure. There was a pretty free suppuration around the stitches, and through the incision in the scrotum. The sutures were removed in two weeks and a half, and in four days more the wounds had closed. He was now allowed to sit up and move about the chamber. The hernia remained up, and there was some induration along the inguinal canal.

May 13th.—About one fortnight after getting up, a slight protrusion was noticed at the internal ring. Examination by the finger revealed the external ring reduced in size about one half, with firm, sharp and defined edges, showing it to be the result of actual approximation of its walls. There was much thickening of the scrotal fascia and cellular tissue over the ring. He was advised to wear a truss, with a weak spring and a flat pad, for some weeks. Within a few days after putting on the truss he left it off several hours while moving about, and the hernia did not come down. It has never come down since. He has worn the truss at first pretty continuously, then rarely, and for the last month not at all. Being an active boy he disliked the truss, and shirked putting it on when he could. During the last few weeks he has done heavy work, assisting in putting in coal, &c., without the truss, and with no bulging, or feeling of weakness in the groin. He considers himself well, and I think he is.*

These cases were operated on with silver wire—the third case, which failed, with silk ligatures. Dr. Wood now gives the preference to the metallic suture. The instrument used was not unlike an aneurism needle, with the eye in the point, and the latter somewhat sharpened.

Neither of these children were able to keep up their herniæ with a truss; or were benefited by one when worn, although fitted by the best makers of these instruments. It is extremely difficult to keep a truss well-fitted on a young, restless and growing child; and we are inclined to think that the cases in which a hernia with a large ring, or a congenital one, is cured by a truss, are few in number, and the exception rather than the rule.

The opportunity which a subcutaneous dissection of the fascia over an enlarged ring affords for the anatomical study of the internal parts, is not the least interesting feature of this method of operating. Many things become very plain and palpable, which cannot be felt through the skin; such are the conjoined tendon, Poupart's ligament, the crural canal, the external iliac artery, &c.

In Gerdy's method the skin covering the sac is invaginated and held in that position by a ligature thrust through the inter-columnar fascia and skin of the groin, till adhesion takes place at the point of ligature. The method proposed by Wutzer substitutes for the finger of the operator a wooden plug variously modified, with the intent to fill the canal and openings, and to stretch them so much as to set up adhesive inflammation all round the invaginated sac. The danger of peritonitis, which is regarded by many as a serious objection to any operation of this kind, may be considered as pretty

* When shown to the Society, the appearance of the parts was as follows:—A linear cicatrix on the right of scrotum, and a slighter round one above the pubes. A little fullness along the course of the inguinal canal of the right side, and some induration. The testes alike, and the cord free. No puckering, or invagination of the skin of the scrotum. A small, external abdominal ring can be felt. Not the slightest bubonocoele—*six months after the operation.*

nearly equal in all. But the results of numerous cases operated on seem to prove that the danger is by no means great, nor sufficient to deter the surgeon from endeavoring to cure this common deformity. "A much more awkward objection," says Mr. Wood, "is drawn from the inefficiency of these methods. In all the cases of Wutzer's operation which have come under my observation, the result has been unsatisfactory; the rupture re-descending on leaving off the truss." He goes on to enumerate the causes of failure as follows:—

The inefficiency of the steps taken to cause adhesion of the surfaces of the posterior fold of the invaginated sac together, and to the posterior wall of the canal. Into this fold, forming thus a secondary sac, the descent of a knuckle of intestine is imminent.

The action of the plug is to dilate the opening and the canal, instead of contracting them; the external ring and canal being left very patulous after Wutzer's operation. The elastic reaction of the skin and the weight of the testis and scrotum tend, consequently, always to drag down the invaginated tissues.

In order to avoid these sources of failure, Mr. Wood thought better to proceed upon a principle directly opposite to that of dilatation, namely, that of *drawing together and compressing by ligature the abdominal opening and inguinal canal, so as to cause their sides to adhere together*. And he also thought best to give the operation a *subcutaneous character*, so as to reach to a higher point within the canal, and to lessen the bulk of the transplanted tissue. These two principles combined he claims to be new in the cure of hernia.

The results intended to be obtained may be briefly recapitulated as follows:—

The posterior and superior boundaries of the dilated canal are drawn forwards and downwards towards Poupart's ligament, and become united by inflammatory adhesion, in the area of pressure exercised by the ligatures, to the anterior and inferior boundaries. By the use of the two ligatures this takes place from the internal opening above, to the external ring below. The effect of this adhesion is to make the posterior wall act like a valve, excluding the bowel by closing against the anterior wall. This action is aided by the contraction of the cicatrized tissues, and increased by the subsequent downward traction of the testis and scrotum. In this way we have an assurance that the older the cure and the more the pressure, the greater the mechanical resistance and security against the return of the protrusion. The spermatic cord is embraced by the contracting tissues in the groove behind Poupart's ligament, which protects it from undue pressure.

In his work on Hernia just published,* Mr. Wood gives the result

* On Rupture, Inguinal, Crural and Umbilical; the Anatomy, Pathology, Diagnosis, Cause and Prevention; with New Methods of effecting a Radical and Permanent Cure. By John Wood, F.R.C.S., &c. London, 1863.

of his operation in *sixty cases*. There was but one death, and that from pyæmia. There were forty-two cures; thus giving about 70 per cent. of *successful* results. Many of these were children, and many, also, adults. A considerable number of the latter worked as sailors, coal-heavers and dock-laborers without trusses, after the operation; and they were kept under observation during a period of a year, or more. It is reasonable to consider the danger of the operation less in a hernia the result of strain, than in a congenital one; for in the latter case we necessarily traverse the peritoneal sac, and in the former we may not. This operation has also the advantage of rendering a truss more efficient, even if it does not cure the hernia. For it leaves the rings smaller and the walls of the inguinal canal nearer together, than they were before.

Mr. Wood has introduced some modifications of his method since these operations were done. But the essential principle is the same; to close the inguinal canal and both rings by approximation, and inflammatory adhesion. And this certainly seems the most reasonable method of attempting a radical cure.

ON THE THERAPEUTIC PROPERTIES OF CARBOLIC ACID.

BY GRACE CALVERT, PH.D., F.R.S.

I DEEM it my duty to draw the attention of the medical profession to the valuable therapeutic properties of carbolic acid, which I have during the last two years brought under the notice of some of the leading medical practitioners of Manchester and London. Before giving particulars of the chief applications of this substance which have been made by these gentlemen, I will first state what carbolic acid really is.

Carbolic acid, hydrated oxide of phenyle, or phenic acid, is a white substance, which crystallizes in long prisms, fusible at 93° Fah., and boiling at 370°. It has a slight tarry and aromatic smell, resembling that of wood creosote, and is freely soluble in alcohol, ether, and glycerine, partially so in glacial acetic acid, and only slightly so in water, of which 100 parts will dissolve only three parts of carbolic acid. It is easily prepared by treating the oils of tar, which distil between 350° and 400°, with caustic lye, removing the caustic lye solution from the neutral oils, and adding hydrochloric acid to the alkaline solution, when the carbolic acid is liberated, and rises to the surface as an oily fluid, from which, by distillation, the abovementioned therapeutic agent is obtained.

My friend and colleague, Thomas Turner, Esq., F.R.C.S., and Senior Surgeon at the Manchester Royal Infirmary, read, at the last meeting of the Lancashire and Cheshire Branch of the British Medical Association, a lengthy paper "On the uses of Carbolic Acid as a Remedial Agent," from which I extract the following:—

"In cases of relaxation of the mucous surfaces, the solution of carbolic acid in glycerine, applied by means of a brush or sponge, is most beneficial. Thus its use is indicated in polypi of the nostrils, as well as ozæna, and in all putrid discharges from the mouth, throat, nostrils, ears, rectum, and vagina.

"I shall next call your attention to the use of carbolic acid in *Diphtheria*, in which disease it is a most valuable remedy used topically to the throat. . . . To apply it I use a sponge mop, which should be used freely, but not saturated, lest a drop should fall into the larynx. The escharotic effect of carbolic acid is confined to the surface to which it is applied, there being no spreading to the contiguous parts, which may happen in the case of nitric acid. The aqueous solution of carbolic acid may be also used as a gargle.

"*Ulcers*.—I apply carbolic acid in different degrees of solution, according to the character of the sore, to carbuncle and ill-conditioned sores.

"*Fistulæ*.—I apply it by means of a wax taper used in lighting gas, or, if the size of the fistula will admit of it, I use a catgut or wax bougie, taking care to carry it to the bottom of the fistula. I have never succeeded in anal fistula where there is a communication with the gut. In these cases an operation is still necessary.

"*Hæmorrhoids*.—The action of carbolic acid is mainly to corrugate, and therefore to obliterate, the sac of the pile. It coagulates the contents, which may be squeezed out; and by corrugation it empties the pile, by which the two surfaces are brought into contact, and thus the sac is obliterated."

Mr. Turner also, in a private note to me, speaks of the use of carbolic acid to fœtid ulcers in the following terms:—"It may be advantageously used, as a solution of one part of acid in forty parts of water, in fœtid ill-conditioned ulcers. It alters the action of the bloodvessels, causing a purulent instead of a sanious discharge, and destroys almost immediately the offensive smell of the secretion. In ulcers having a communication with carious bone, or even necrosis (where the bone is dead), it has, in its diluted state, a good effect when injected into the sinuses leading to the diseased bones. When there is mere caries or ulceration of the bone, it effects the healing process, and in necrosis it promotes the exfoliation of the dead portion. In gangrenous and all offensive sores, it removes all disagreeable smell and putrescency, and may render the discharge innocuous to the contiguous living and unaffected tissues. In its diluted state, therefore, it is a great boon to patients laboring under that class of disease."

When Mr. Turner wishes to employ carbolic acid in a less diluted state than the aqueous solution, and yet not in its full strength as a caustic, he prefers the following solution. He mixes two drachms of pure carbolic acid in one drachm of liquor potassæ and half a pint of water.

It is with pleasure that I am able to add that Mr. Oscar Clayton, F.R.C.S., and Mr. Campbell De Morgan, F.R.C.S., have informed me of several successful applications which they have made of carbolic acid, confirming many of the results of Mr. Turner's, above described.

Mr. Oscar Clayton states that in two cases of fœtor of breath, arising from a diseased state of the mucous membrane covering the tonsils, he applied to the parts a mixture of equal proportions of glycerine and carbolic acid, and with perfect success.

Mr. Campbell De Morgan has also applied the glycerine solution of carbolic acid with success to several cases of lupus.

Dr. James Whitehead, of Manchester, prefers treating this disease (lupus) with an ointment made of half a drachm of carbolic acid to one ounce of spermaceti ointment.

Mr. Oscar Clayton has also successfully employed the aqueous solution to several skin diseases—viz., lepra, tinea capitis, rupia, &c.

Dr. Roberts and other medical men have employed carbolic acid with advantage internally for dyspepsia and other derangements of digestion.

Dr. Pattison, of St. John's-wood, writes to me as follows:—"I have prescribed your carbolic acid in several cases of fungoid disease during the last nine months with marked success. In three cases of fungus hæmatodes in which I employed it, the disease in all was checked in a remarkable manner. A thick crust was speedily formed on the ulcerated and bleeding surfaces, the exhausting discharges were completely arrested, and in one case there was great diminution in the size of the fungous mass. Your carbolic acid is almost a specific in cases of anthrax."

I also think it well to insert the following remarks from Dr. Thomas Hughes, M.R.C.S., F.S.A., London:—"Sir: I have used Dr. Calvert's carbolic acid as an external application in cases of sloughing wounds with the most marvellous effect; and in no case was its effect more strikingly manifest than in the case of Rogers, one of your miners, who received such a contusion of the hand as to destroy the arteries leading to the index and little fingers; and, in spite of every effort made to restore the circulation in the fingers, sloughing took place, and which appeared to spread and extend to the hand and arm with such rapidity, that if it had not been for the timely application of the carbolic acid the man would have lost his arm from the most destructive sloughing I ever witnessed. The effect of carbolic acid was so decidedly marked as to leave no doubt of its wonderful effects in checking the spreading of sloughing, and in accelerating the separation of slough. It seemed also to have the effect of promoting the growth of granulations, and hastening the healing of the wounds. I have used carbolic acid in several other cases with the same happy effect."

"August 29th, 1863."

I have found it very successful in one or two cases of intestinal worms, given in doses of a teaspoonful of the aqueous solution in a tumbler of water morning and evening. I have also applied the water solution externally with perfect success in several cases of psora.

Two eminent French physiologists, MM. Gratiolet and Lemaire, have published a most interesting paper on the Action of Carbolic Acid in arresting Putrefaction; and they have made the important observation that, whilst it does not interfere with chemical fermentations, such as the conversion of amygdaline into hydruret of benzoile, and the conversion of myronic acid by myrosyne, it completely arrests all vegetable and animal fermentations which arise from cryptogamic life. They have also observed that when carbolic acid is mixed with the vaccine virus, it entirely prevents its peculiar action upon animal organization.

These valuable observations of MM. Gratiolet and Lemaire strongly impress me with the idea that the use of carbolic acid might prove of great advantage in the early stages of consumption, if applied in the following manner—viz., by making the patient frequently inhale the vapor of the acid by means of an inhaler containing some cotton-wool saturated with the acid so that the inspired air must pass through the wool. I would at the same time administer a teaspoonful of the aqueous solution, mixed with two ounces of peppermint-water, three times a day. I think also that the same treatment might be advantageously tried in cases of scarlatina and typhoid fever, with the addition of saturating the air of the chamber as far as possible with the vapor, by placing lint or wool steeped in carbolic acid in various parts of the room. I would also administer once a day an enema consisting of a weak solution of carbolic acid.—*London Lancet*, Sept. 26.

SUIT FOR DAMAGES FOR ALLEGED MALPRACTICE.

[THE *Argus and Spectator*, printed at Newport, N. H., publishes the following report of a suit for damages for alleged malpractice, which was recently tried at that place. The trial is interesting for several reasons. First, its length—a week; second, the verdict, for the defendant; and third, the description of a somewhat novel operation contained in the deposition of Prof. H. J. Bigelow. It will be observed that the Professor employs popular language in order to make himself understood by the jury; of course it is not necessary to interpret it to medical readers.—EDS.]

The case of Elbridge Dowlin *vs.* John L. Swett was commenced on Friday, Sept. 11th, and occupied the Court until Thursday afternoon, the 17th. Counsel for the plaintiff, Hon. E. L. Cushing, of Charlestown, and Arthur Chase, Esq., of Claremont. For the defendant, Hon. Edmund Burke and A. S. Wait, Esq., of Newport.

The parties both reside in Newport, and the writ alleged that the defendant, being a physician and surgeon, undertook to set, heal and cure the plaintiff's arm, which had been fractured; but so carelessly, negligently and unskillfully treated the same that the fractured bone refused to unite, and a false joint was formed, whereby the arm became useless, and the plaintiff was maimed for life.

It appeared in evidence that the plaintiff, who was an operative in one of the woolen mills in Newport, on the 5th of December, 1861, while endeavoring to adjust a belt upon a drum, was caught by the sleeve of his frock upon, and carried round by an iron shaft $1\frac{1}{8}$ inch square, revolving at a velocity of eighty revolutions per minute. As soon as the machinery could be stopped he was taken down, in a senseless condition, his person severely bruised, and his left arm fractured. The defendant was immediately sent for, and was soon in attendance. After the adoption of some measures for the relief of the plaintiff he was removed to his house, where the defendant continued to attend him.

The parties both testified, and it appeared that about the 28th of January, 1862, and after the plaintiff had become able to visit the defendant at his office, by a sudden movement, caused by supposing his child was about to fall, the plaintiff re-fractured his arm; though the extent to which the same had united, and also the character of the movement which separated the fragments, were in dispute. The plaintiff did not inform the defendant of this fact until two or three days afterwards, when he called upon him at his office. The defendant removed and re-applied the dressings, and continued to take charge of the case until the 16th of May, when the re-union was regarded so far advanced as to require no farther attention from the defendant, though he gave directions that the arm should not be made use of in any laborious employment.

Much evidence was introduced on both sides in regard to the manner in which the defendant treated the arm, as well as the conduct of the plaintiff after the 16th of May, which might have an influence in retarding the consolidating of the union. On the 13th of July the plaintiff called upon the defendant, when it was ascertained that there was only a ligamentous union, and of that character which is sometimes called a false joint. The defendant adopted some measures with a view to inducing the bone still to unite; but the plaintiff soon after abandoned the defendant, and applied to Dr. Sanborn, of Newport, who, in connection with Dr. Gregg, inserted a seton through the arm near the point of fracture. But this not proving successful, the plaintiff, on the 4th of December, entered the Mass. General Hospital at Boston, where Dr. Henry J. Bigelow, Surgeon, and Professor of Surgery at Harvard University, performed an operation which is described in the answers in his deposition given below; and which proving successful, the plaintiff has now a good arm, except that it is shorter, by from one to two inches, than the other.

Drs. Gregg and Sanborn testified for the plaintiff.

Drs. Jarvis and Tolles, of Claremont, and Crosby, of Hanover, testified for the defendant, in addition to the deposition of Dr. Bigelow, which was read upon the same side. The following is a portion of the deposition of Dr. Bigelow:

Interrogatory 8. Describe the course of treatment that said Dowlin received at the Hospital.

Ans. The treatment commenced with a surgical operation. I will describe this in detail; and can make it plainer by first speaking of the condition of the bones which required it. The broken ends of the bones were lying near each other, in part touching, covered with gristle, and tied together by elastic cords. Outside this was a quantity of tough substance with very little life in it; at any rate not enough to make bone and mend the fracture. The operation consisted of getting rid of this gristle and tough substance, and then in bringing to the place a membrane which could make new bone, and so stiffen the broken part. To do this, a cut was made down upon the broken place. The gristly ends of the bone were cleaned and turned out so as to get at them. The periosteum was then turned back from each end. The periosteum is a membrane which lies next to healthy bone and makes the bone—forms the bone. So that by turning this membrane back like the cuff of a shirt sleeve for about an inch from the nearest healthy bone, and then sawing off this uncovered bone, and by then bringing the cuff down again where it belonged, it would at once go to work to make new bone; and this bone would cause the broken place to unite—that is, it would solder it together. This was the operation which was done. The gristly ends of the bone were turned out. The periosteum stripped back from the adjoining sound bone, which was sawed off with the gristle. The cuff was then turned down again, and the two ends of the bone brought together and wired close with a silver wire passed through holes drilled for that purpose. The periosteum then caused the fragments to unite by new bone, shaped somewhat like the solder round the joint of lead pipe.

Interrogatory 9. To what extent had the operation you have described with the periosteum then been known or practised in surgery?

Ans. Only a few times. I have done it several times myself with success. The first time I did it I supposed I had invented it; but a short time, however, after my first operation, there came to this country an account of a similar operation just done in Europe, of which I had not heard before this operation. I have seen only one American case published here since my first was published.

After the arguments and charge the jury retired, and in ten minutes returned with a verdict for the defendant.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

AUGUST 24th.—*Acute Pustular Eruption*.—Dr. ABBOT said he had recently seen several cases of severe pustular eruption on the face, such as he had never observed before. The affection was an acute one, and consisted in a scattered eruption of pustules of various sizes, on a large, highly inflamed and very prominent base. Some of the pustules were as large as a cherry-stone, and occasionally one was umbilicated precisely like a smallpox pustule. In some instances the inflamed base was half or two thirds of an inch in diameter, and in one case the inflammation took the form of a superficial abscess, about an inch across. The eruption in every case appeared on the face or beneath the chin, and on the neck; in every instance, also, it was preceded and accompanied by an eruption of lichen tropicus on other parts of the body. In one patient the inflammation extended more deeply, producing proper boils. The pustules varied in number, amounting to some forty or fifty in one patient; they were not very painful. Occurring, as this eruption did, in very hot weather, there seemed good reason to believe that it was caused by the excessive action of the skin, and was only a fuller development of the inflammation which in other parts of the body had the papular form.

Dr. MINOT said that a man entered the Hospital under his care, Aug. 4th, with symptoms of typhoid fever. The entire surface of his body was covered with a dull-red rash, in distinct spots, some of which were raised with vesicular or purulent summits. In a few days a number of large pustules appeared on different parts of the face and neck, some of them resembling common boils, and one, on the nose, having the characters of a small carbuncle. This was laid open, and discharged thick pus, leaving a considerable cavity, which slowly healed up. In the mean time the fever pursued its regular course to a favorable termination, and the patient was discharged Sept. 5th.

Dr. CABOT had seen an unusual amount of prickly heat, of late, which seemed to be caused by perspiration, particularly in patients confined to the bed. In an epidemic of scabies which lately appeared at the "Temporary Home," in Kneeland Street, the eruption speedily took on the appearances of impetigo, ecthyma, &c.

SEPT. 14th.—*Tumor of the Brain*.—Dr. C. D. HOMANS showed the specimen. The tumor, which was of a fibrous character, and quite dense, occupied the centre of the middle lobe of the cerebrum on the right side, just over the lateral ventricle. It was of about the size of a small orange. The patient was a gentleman, about 40 years old, who had always been healthy, until he was suddenly seized, after some excitement, with an epileptic fit, which was followed by two others the same day—the only ones he had.. After this came on failure of strength, loss of appetite, profound depression of spirits, and finally coma and death, three and a half months after the first attack. There was never any paralysis, nor vomiting, and, apart from the depression of spirits, no affection of the mental faculties.

Dr. ABBOT said that this case was of much interest to him in connec-

tion with one he had seen the day before, and which he considered to be a tumor at the base of the brain. The patient, a middle-aged gentleman, had been entirely blind and deaf for four years, but was in good health, without paralysis, and in perfect possession of his mental faculties. The symptoms began with irregularity of the gait and severe pain in the back of the head. At times there has been intense gastrodynia and also pain in the right leg. At rare intervals there has been a violent convulsion, but none of late. The appetite has been at times excessive. The affection is attributed by the friends of the patient to a severe fall, many years since, on the back of the head.

Dr. JACKSON remarked that Dr. Homans's case illustrated the want of correspondence so often noticed between the symptoms and the lesions in diseases of the brain. Many symptoms in the above case which we should suppose would be present, were wanting; the most remarkable features being the retention of the mental faculties and the absence of paralysis. The convulsions with which the case began are usually observed towards the close. He had noticed loss of sight in several cases where the disease was nowhere near the optic nerve. The form of cerebral disease in any particular case is exceedingly difficult to diagnosticate; and it is a great point to make out that there is organic disease at all.

Dr. HOMANS had seen a patient who had been treated a long time for uterine disease, without any symptom of disease of the brain till shortly before her death. At the autopsy, a mass of tubercle, as large as a pigeon's egg, was found in the cerebellum. The uterus was also filled with tubercular matter.

Dr. JACKSON had seen a case in which a large, solid tumor arising from the dura mater produced a deep indentation of the brain, but nowhere near the optic nerve. The mental faculties were perfect, the health good until within a few days of death, and there was no paralysis; but there was total blindness, and such severe pain that the case was for a long time regarded as one of neuralgia. In adults who die of tubercular meningitis we often find masses of tubercle in the cerebellum, which must have existed for a long time without giving rise to cerebral symptoms before the invasion of the acute disease, though the patients generally complain of headache.

SEPT. 14th.—Dr. ABBOT said he had received a communication from the physician who attended the patient whose obstetric history he had given at the meeting of August 10th, during her first four labors, making some corrections in his statements. They did not materially affect the object which he had in view, namely, to show that a patient may have a series of difficult or abnormal labors, followed by a natural one. His previous statements were based on information received from the patient herself and the gentleman who had been called in consultation. In the communication referred to, it is stated that "in the second pregnancy the patient was not exactly persuaded to allow premature labor to be induced. She was examined by me in consultation with Dr. —, who, as you know, was also present at the first confinement. Upon actual measurement, I found the antero-posterior diameter of the pelvis somewhat contracted, but, as in your opinion, I thought the birth of a child at full time might take place. I was the more inclined to this opinion as the first child was unusually large, weighing about eleven pounds *after the removal of the brain*. But Dr.

— decidedly advised premature delivery. In deference to his superior obstetrical experience I acceded to his opinion, and the woman submitted. Weight of child, nine pounds.

"*Third Pregnancy.* Head presentation; partial placenta prævia; violent flooding, drenching the floor and bed. When I reached the patient she was still flowing, fainting and almost pulseless. Delivered her at once of a dead child, and directly after removed the placenta with ease. The flowing ceased, and the patient had a quick recovery.

"*Fourth Pregnancy.*—*I advised the patient to consult you.* The patient was extremely anxious to go her full time, but Dr. — still counselled premature delivery. I told the patient that if any other respectable physician would, on personal examination, say that she could bear a child at full time, I should be willing to attend her. She consulted you, and in deference to your opinion I allowed her to go to the end of her pregnancy. In this case I did not deliver '*by the feet.*' This was a case of breech presentation. The breech was impacted very firmly at the brim of the pelvis for six or eight hours. The expulsive pains were extremely violent, and finally I attempted to assist the passage of the child. I hooked my forefinger over one of the thighs near the hip-joint, both thighs being flexed upon the abdomen, and made extractive efforts during the continuance of the pain. At one time the pain ceased suddenly, and before I could lessen my hold the thigh was broken at its upper third.

"I would also say that in every case, whether premature or at full time, the expulsive action of the womb was remarkably violent, and ether was given freely."

SEPT. 14th.—*Fibroid Tumor of the Uterus.*—Dr. ELLIS showed a tumor which had been removed by Dr. STORER from the uterus of a woman about 35 years of age. The patient had had a sensation of bearing-down, with frequent difficulty, sometimes amounting to suppression, of micturition, for three or four years. Of late she had had, at times, slight hæmorrhage. Dr. S. discovered, upon vaginal examination, a tumor, filling the entire pelvis, attached to the inner edge of the os uteri. Passing the chain of an *écraseur* around the base, he readily cut it off. The instrument was applied with great difficulty, on account of the want of space in which to manipulate. The tumor measured in circumference twelve inches, and two and a half inches at its attachment. The amount of blood lost was less than an ounce. In ten days the patient was about house, and speedily recovered.

The mass was of a regular and somewhat oval form, distinctly vascular, smooth upon the surface, tough, though not dense to the feel; apparently of a fibro-cellular tissue, though differing, in regard to its uniformity, from the common fibrous tumor of the uterus.

SEPT. 28th.—*Dislocation of the Humerus directly backward upon the Scapula.*—Dr. CABOT reported the following case.

D. C. C., æt. 32 years, of moderate muscular development, a carpenter by occupation, a drinking man, not previously subject to fits, on the night of the 25th of August had an epileptic fit, with violent convulsive action. On recovering his consciousness, he found his right shoulder very painful, a loss of power to move the limb, and a swelling on the back of the shoulder. The swelling increased for some hours, and did not diminish for a week; it was seen by three or four medical men, who, according to the patient's account, assured him

that there was no dislocation, and who ordered liniments, &c. When Dr. C. saw him, Sept. 11th, seventeen days after the occurrence of the fit, the swelling had mostly subsided. He found the patient with the elbow pressed in towards the side, with almost complete inability to move the humerus, and but slight power to move the forearm; all motion was painful. The acromion was prominent and the glenoid cavity empty. There was a considerable prominence directly behind the glenoid cavity, to which the shaft of the humerus could be traced; in short, dislocation of the head of the humerus directly backward upon the neck of the scapula, and resting against the posterior edge of the glenoid cavity.

The patient being seated in a chair, Dr. C. placed his knee under the axilla, and using the humerus as a lever, endeavored to lift the bone out of its place, at the same time carrying the forearm across the patient's chest, thus rotating the humerus inwards, in order to relax the pectoral muscle. Failing in this, he seized the scapula with his left hand, and at the same time drew the arm forcibly at a right angle to the body, then suddenly bending it over his knee, again repeated the manœuvre first described, shifting, at the same time, his left hand from the scapula to the head of the humerus, and pressing it towards the socket, when he had the satisfaction of feeling it yield and pass into the glenoid cavity. The shape of the joint was immediately restored, and very soon the patient expressed himself as feeling much easier than he had been since the accident, and the motion was restored. The operation was performed without ether, and without much difficulty. Dr. C. saw the patient a week afterwards, and found the part doing well, though still somewhat stiff and sore.

Sir A. Cooper describes two cases of apparently precisely similar dislocation, which he reduced by carrying the humerus directly upwards and bending the forearm behind the head.

Sept. 28th.—*Diphtheria*.—Dr. H. K. OLIVER reported the following case of this disease. The patient, a stout, healthy, married man, 28 years old, a machinist, lived in the upper part of Revere Street, and consequently on high ground. His lodgings were in a comfortable house which was free from effluvia from drains or privies, and he had occupied them for a year. There was no other case of diphtheria in the vicinity, so far as known. He was habitually in different parts of the city, doing "job work." On Sunday, Sept. 6th, he worked at repairs in a distillery. That night he had some symptoms of indisposition. He went to work early the next morning, but remarked that his throat was sore. At 11 o'clock he left work, and returned home in a hack. He had headache and vomiting. An irregular practitioner treated him for tonsillitis, and predicting the speedy rupture of an abscess, made only one or two visits.

He was seen by Dr. Oliver, Sept. 10th, at 3½, P.M. He was sitting on the edge of his bed, able to walk about the room. His face was pale and sallow. Both sides of his throat were much swollen and painful, the swelling extending over the parotid gland. The mouth was opened with difficulty; tongue covered with a thick, dirty-white coat. A white membrane, apparently nearly half an inch thick, covered the right side of the soft palate and tonsil; there was much difficulty in examining the parts of the throat behind these parts. He swallowed without a great deal of difficulty, and with scarcely any

pain. The breathing was similar to that in obstruction by inflammation of the substance of the tonsil. He spoke with great difficulty. Breath extremely offensive. Pulse 84, and natural; temperature of skin normal. He was ordered the tincture of the muriate of iron, and a gargle of muriatic acid, muriate of soda and honey; beef tea at frequent intervals, and extract of conium at night. In the evening, Dr. Oliver removed the membrane with dressing forceps, giving considerable relief. It was about an inch and a half wide and fully a third of an inch thick, and was moulded to the parts from which it was removed.

On the 10th he had slept somewhat better; otherwise, the same. Pulse not quickened. A membrane of the same size and thickness as that of the previous evening, was removed from the same part of the palate. It was less tough than the other, breaking in removal.

[These two specimens were shown to the Society.]

At 2½, P.M. Dr. O. was sent for, and found the patient sitting on the edge of his bed, breathing with difficulty. He left him to make arrangements for opening the trachea, first calling upon Dr. MINOT for assistance. On returning, the patient was found to be easier, and upon consultation with Dr. M., it was decided to postpone operating, and to apply dilute perchloride of iron to the pharynx and soft palate with the sponge probang, after removing as much of the membrane (which had begun to form again) as its fragile condition would allow. The application brought away considerable coagulated blood and mucus, with shreds of membrane. The patient remarked that it was "a good job." He was ordered brandy, and a weak solution of perchloride of iron as a gargle. He was still able to swallow without much difficulty.

At 8, P.M., the patient seemed easier, and expressed himself to that effect. The face had perhaps something of a leaden color, and the pulse was less full. At 10 o'clock, he had another attack of dyspnoea, more severe than the first. He sprang from the bed and rushed into the entry, gasping for breath. He was led back into the room, and lay down on the floor. Dr. O. was at once sent for, and in his absence Dr. PAGE was called, who went to the house immediately, but on his arrival the patient was dead. There was no autopsy. Up to the present time there has been no similar case in the house, though two or three have been reported in the Ward.

Dr. MINOT remarked that the mode of death in this case was precisely similar to that in the case of Dr. Adams, and several others reported to the Society. He regretted exceedingly that tracheotomy had not been performed: it would not have hastened death, and it might have saved life. The patient seemed so free from dyspnoea that it seemed safe to postpone operating, but in another similar case Dr. M. would urge tracheotomy at once.

SEPT. 4th.—*Cystic Disease of the Ovary*.—Dr. ELLIS showed the specimen for Dr. STORER, to whom it had been sent by Dr. Mason, of Charlestown, who stated that it had been expelled from the uterus of a woman who had had flowing at intervals for several months, and who supposed herself pregnant.

The diseased mass, which was only one half of the original tumor, was about half as large again as the fist. The cysts were quite large generally, and were connected by portions of the fetal membranes,

the amniotic cavity being quite distinct, though there was no trace of an embryo. The amnion could be separated from the chorion, and there were distinct traces of a decidua, besides a considerable amount of recent coagula.

Corrections.—In Dr. Cushing's case, page 140, the paralysis was upon the left side; and in his second case, page 141, the following statement should have been made:—The interventricular septum near the diseased valves, was to the extent of about half an inch softened and disorganized; the central portion of the affected part being broken down into an irregular, ill-defined cavity. This was evidently a recent disease; and if it was not the cause of the symptoms that preceded death for ten days, there was none found.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 15, 1863.

WE feel that we cannot better express the universal feeling of sorrow caused by the announcement of the sudden death of Dr. George Hayward, or the great respect in which his character was held by the profession, and which will always be attached to his memory, than by simply laying before our readers the following resolutions, prepared by two of the bodies of which he was a distinguished member.

As stated in our last issue, a committee of the Councillors of the Massachusetts Medical Society was appointed, with full powers to adopt such measures as they, in consultation with others, should deem appropriate to the occasion. This committee, finding that it was the express desire of Dr. Hayward that no public demonstration be made by his medical associates, at his funeral, in pursuance of this vote present the following resolutions:—

Resolved, That in the death of Dr. George Hayward, the Massachusetts Medical Society has sustained the loss of a prominent, faithful and efficient member.

Resolved, That we gratefully recognize those particular traits of medical character, which, during a long and useful professional career, made him not only prominent in this Society, but serviceable to the profession at large. These features appear in his great fondness for his profession and his high appreciation of its dignity and importance, in his clear and distinct recognition of fixed principles in medicine and surgery; in his readiness to assail each false dogma in medicine, and his deep dislike of every form of empiricism; and in his sanguine disposition, which gave earnestness and energy to his general character.

Resolved, That we recognize the practical application of these prominent features of his medical character, in the faithfulness of his personal attentions to the sick; in his important services to this Society while a member of the Council, for a long series of years, as shown by his able and valuable reports on various subjects, and by the dignity, hospitality and propriety of his course when President of the Society; in his early and continued interest in the Massachusetts General Hospital, and his long and successful career as a surgeon of that institution; in his usefulness to this community as a member, for many years, of the Board of Consulting Physicians for the city—especially at the time of the first invasion of Asiatic cholera; in the public benefit more recently conferred by his strict fidelity as chairman of the Board of Examiners for Military Surgeons—by which the reputation of those entering the service from this Commonwealth has been pre-eminent; in his early use of the anæsthetic agents in surgery, and his earnest

efforts, at home and abroad, to lead the profession to make use only of that one which is the safest and best; in his fostering care of students of medicine, and his faithful instructions to them while occupying a professor's chair.

Nor would we forget his labors for Harvard College, and other literary and scientific associations which have thrown a reflex honor upon the medical profession.

Resolved, That, by this slight recognition of some parts of his useful career, we are reminded that we have lost an honored associate and an esteemed friend.

Resolved, That a copy of these resolutions be sent by the Secretary of the Society to his family, with whom we deeply sympathize in their loss, to the Boston Medical and Surgical Journal, and to some of the city newspapers.

J. C. DALTON,	} Committee.
JOHN JEFFRIES,	
J. MASON WARREN,	

BOSTON, OCTOBER 9th, 1863.

At a meeting of the Medical Commission of Massachusetts held this day, a communication from the Surgeon-General of the State was read, announcing the death of its senior member, Dr. George Hayward, and the desire of his Excellency the Governor to coöperate in some mark of official respect to the memory of the deceased.

The following resolutions were thereupon adopted.

That this Commission learn with great regret of the death of Dr. George Hayward, whose judgment and experience have been so cheerfully given to the Commonwealth as a member of the Medical Commission and Board of Examining Surgeons, over whose meetings he has so long presided.

That in his death the State has been deprived of one who through a long life filled with honor many offices of high public and private trust, and the medical profession of a member whose learning, skill and influence were always freely given in the interests of science and humanity.

Voted, That these resolutions be communicated to the Governor of the Commonwealth.

S. D. TOWNSEND,	GEO. H. GAY,
JOHN WARE,	R. M. HODGES,
J. MASON WARREN,	W. J. DALE,
S. CABOT,	<i>Surg.-General.</i>

NITROUS OXIDE GAS AS AN ANÆSTHETIC. *Messrs. Editors*,—Within a few weeks a very large demand has arisen for nitrate of ammonia, to be used in the manufacture of the nitrous oxide gas. A salt which a year since was called for only at long intervals and in small parcels, now suddenly assumes importance as a manufacture, and we are called upon to furnish from our laboratory from *fifty to one hundred pounds daily*.

No allusion, I believe, has been made in the JOURNAL to the extraordinary "laughing gas" furor now raging. Its use has been thus far confined to "travelling lecturers," or "exhibitors," and the dentists. The latter class are in a whirl of excitement respecting its use as an anæsthetic, and many are busy extracting teeth by its aid. Insensibility being produced, the operation is painless. It is alleged that its effects are far more pleasant and transitory than those from ether or chloroform, and that entire exemption from suffering is secured. An operator who claims to have administered the gas to more than two thousand persons within the year, asserts that not a single instance of unpleasant effects has been observed, and that all brought under its influence have declared the sensations delightful in the extreme. He believes that it is an agent of great importance remedially,

and that it is capable of affording speedy and permanent relief, in cases of headache, low vital action, mental depression, &c. &c.

From some observation of its employment, and experiment in its use, I am inclined to regard it as worthy the careful attention of medical gentlemen. Instances of quite remarkable curative effects have been noticed, and upon theoretical grounds it would seem well adapted, by inhalation, to produce decided effects in certain diseases. As regards safety in its use, the fact that it has been for more than a year in the hands of irresponsible and uneducated men, travelling from place to place, causing thousands to inhale it for purpose of fun and entertainment, and no single instance of injury coming to light, is certainly calculated to dispel fear to a very considerable extent.

J. R. NICHOLS.

WE are much pleased to record the recognition contained in the following General Order, of the important services of the Surgeon-General of Massachusetts, Dr. Wm. J. Dale. All who have had any relations with this gentleman in his official capacity will bear cordial testimony to the truth of the encomium contained in the Governor's order. Our soldiers in the field and hospital are under lasting obligations to him for his untiring interest in their welfare.

HEADQUARTERS, Boston, Oct. 7th, 1863.

GENERAL ORDER, No. 24.

In view of the conscientious, able and unwearied services rendered during the past two years by Col. William J. Dale, as Surgeon-General of this Commonwealth, His Excellency the Governor directs that he hereafter take rank as Brigadier-General, and that he be obeyed and respected accordingly.

By order of His Excellency, JOHN A. ANDREW, Governor and Commander-in-Chief.

WILLIAM SCHOULER, Adjutant-General.

SOME explanation is due to our readers for the publication this week of Dr. Cheever's paper on the radical cure of hernia, of which an abstract appeared in last week's JOURNAL. It was not intended by the author for publication in our pages, but was prepared as a contribution to the Transactions of the Boston Society for Medical Improvement, which are always printed first in the JOURNAL. Had he been aware of this fact, the abstract would not have been published. The interest of the paper in full will, we trust, be ample compensation for whatever of repetition it may contain.

BOSTON DISPENSARY.—At the annual meeting of the Boston Dispensary, held on the 8th inst., the following officers were elected:—

Managers.—Samuel May, Nathaniel L. Frothingham, Uriel Crocker, Henry B. Rogers, J. Huntington Wolcott, George H. Kuhn, Abbott Lawrence, W. R. Lawrence, Henry A. Whitney, Samuel Johnson, Jr., Thomas Wigglesworth, John C. Ropes.

Treasurer.—Francis E. Parker.

Appointments by the Managers. *Consulting Physicians.*—Jacob Bigelow, P. M. Crane.

Consulting Surgeons.—S. D. Townsend, J. Mason Warren.

Attendants at the Central Office.—Henry T. Damon, *Superintendent*; A. K. Carruthers, *Apothecary*; *Surgeons*—W. W. Morland, C. D. Homan, D. W. Cheever, Algernon Coolidge. *Physicians*—J. B. Upham, J. N. Borland, A. Sinclair, S. L. Sprague, H. K. Oliver, Jr., S. W. Bowles, J. C. White.

District Physicians.—District No. 1, Chas. C. Street; No. 2, John W. Hinckley; No. 3, Dewey R. Warren; No. 4, Henry L. Shaw; No. 5, Charles K. Wheeler; No. 6, John Hart; No. 7, Thomas A. Hoskins; No. 8, William E. Rice; No. 9, vacant.

MORTALITY FROM THE USE OF CHLOROFORM AS AN ANÆSTHETIC.—Dr. Kidd writes to the *London Medical Times and Gazette* that “thirty-six deaths from chloroform are noted this year, all due to the want of A B C knowledge of the subject.” If such is the danger arising from the little knowledge of this dangerous agent, it is high time its use should be limited by special license to those who have mastered the whole alphabet of it. But we greatly fear that those who have reached the Omega are but little more secure from dangerous results in using it than those who are yet mastering the Alpha.

WE understand that the Stanley Hospital, Newbern, N. C., has recently received the handsome donation of \$600 from Dr. J. Baxter Upham, of this city, for the purpose of supplying wine and other luxuries to the sick and dying soldiers in that institution.

THE whole number of deaths in the city of Providence, R. I., during the month of September, 1863, was 127; being 31 less than in the preceding month, but 26 more than in September, 1862, and 30 more than the average for September during the last seven years. The number of deaths from “summer complaints” was unusually large for the season, almost the whole excess over the year 1862 being from those diseases.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 10th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	57	44	101
Ave. mortality of corresponding weeks for ten years, 1853—1863,	43.3	40.0	83.3
Average corrected to increased population	00	00	91.29
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
12	2	0	4	0	4	7	8

BOOKS RECEIVED.—The Principles and Practice of Ophthalmic Medicine and Surgery. By T. Wharton Jones, F.R.S., &c. (From Blanchard and Lea.)

DIED.—At New York, 3d inst., of typhus fever, Arthur A. Shiverick, M.D., aged 38 years, formerly of New Bedford.

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 10th, 101. Males, 57—Females, 44.—Accident, 1—anaemia, 1—apoplexy, 3—inflammation of the bowels, 1—ulceration of the bowels, 1—congestion of the brain, 2—disease of the brain, 1—bronchitis, 3—cancer, 2—cholera infantum, 8—consumption, 12—convulsions, 3—croup, 2—debility, 1—diarrhoea, 6—diphtheria, 2—dropsy, 3—dropsy of the brain, 3—drowned, 1—dysentery, 4—epilepsy, 1—typhoid fever, 7—gastritis, 1—disease of the heart, 4—malformation of the heart, 1—congestion of the lungs, 3—inflammation of the lungs, 4—marasmus, 5—old age, 1—paralysis, 5—puerperal disease, 1—tabes mesenterica, 1—unknown, 6—worms, 1.

Under 5 years of age, 36—between 5 and 20 years, 7—between 20 and 40 years, 26—between 40 and 60 years, 20—above 60 years, 12. Born in the United States, 67—Ireland, 26—other places, 8.

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VOL. LXIX.

THURSDAY, OCTOBER 22, 1863.

No. 12.

PRIMIPAROUS LABOR FOLLOWED BY CONVULSIONS AND PELVIC CELLULITIS.

[Read before the Boston Society for Medical Observation, Oct. 5th, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY A. D. SINCLAIR, M.D., BOSTON.

MRS. C., æt. 27, large and apparently strong, but easily fatigued, was delivered of her first child at 5 o'clock, A.M., July 5th, 1862. There was nothing unusual about her labor, except that the placenta, membranes and liquor amnii were of a dark, dirty-green color—a state of things sometimes met with, but so far as I know not yet satisfactorily explained. In answer to inquiry as to her general feelings after delivery, said that she had had a little headache for a day or two, and that she was subject to it. I visited her in the evening, and found that matters had progressed as usual in such cases; she was cheerful; headache not complained of, though still present. At 3 o'clock, A.M., on the 6th, she was suddenly seized with a convulsive attack of three or four minutes' duration. Dr. York was immediately called, who found her vomiting, almost incessantly, large quantities of a greenish fluid. He advised means which relieved her stomach, and administered chloroform on return of convulsions. On leaving the house, he instructed the nurse how to administer ether, which he substituted for chloroform on account of its greater safety, particularly in the hands of an inexperienced person. On my arrival, at 5, A.M., it was found that the nurse had given the ether so inefficiently that the latter failed entirely to control the convulsive paroxysms. Shortly after entering the chamber an attack came on, giving an opportunity of observing its character and duration. It was epileptiform; rigidity and convulsions marked, and lasting between two and three minutes; the comatose condition not very marked nor prolonged. She foamed at the mouth, but did not bite her tongue. Three grains each of calomel and extract of hyoscyamus were given, to be followed in three hours by a draught of two ounces of sulphate of magnesia; eight leeches to the temples. Ether was continued; but on suspending its influence

to allow a short return to consciousness, an attack very soon came on. After an absence of two or three hours, I found that a portion of the calomel, &c., was vomited, and that but one half of the saline mixture was swallowed. At 10, A.M., I commenced the administration of ether myself, and did not discontinue its use nor allow return to consciousness for five consecutive hours; during which time there was no return of convulsions. In the meanwhile four leeches were applied to the temples, hair cut short off and a bladder of ice placed to the head. Between 12 and 1, an enema of salt and water was given, followed by a free discharge from the bowels. Urine was obtained by means of a catheter, and found to contain a large amount of albumen. At 3, P.M., six grains each of calomel and jalap were given, followed in a little while by the remainder of the saline mixture. Bowels moved copiously at 5, P.M. Is very restless, endeavoring to get out of the bed; not rational. Was made to swallow a small quantity of gruel. Lochia not entirely suppressed. Pulse, from being 112 to 120 in the A.M., had fallen to from 90 to 100. No convulsions since discontinuance of the ether. Had, in all, about ten quite severe paroxysms. Dr. Luther Parks, Jr., saw this patient in the evening, and advised ether to be administered every hour during the night, which was done.

July 7th, morning.—No return of convulsions. Is coherent, though somewhat stupid. Some headache. Pulse 90. Evening.—Has had a good day. Now soundly asleep. Pulse 80. Took three cupfuls of gruel since morning, and drank some cream-of-tartar lemonade. Some lochial discharge. Bladder of ice-water to head all day. Has complained of feeling much bruised.

8th.—Slept greater part of night. Head more clear this morning, but headache continues. Pulse 80 to 84. 2, P.M.—Pulse 100. Suffers much from breasts. Is directed to take a mixture containing liq. acet. ammon., tart. antimony and sulphate of magnesia.

9th.—Breasts better. Several dejections. No headache. Pulse 84. Is to have some increase of diet.

10th.—Scarcely a trace of albumen in urine.

11th.—Improving rapidly. To have beef-tea and a little toast.

13th.—Since yesterday, pain and throbbing in left groin, and some dysuria. Had a chill in the evening. Pulse 96. A pretty extensive effusion is found to the left of the cervix uteri, and pressure here caused great pain. Eight leeches to be applied to anus, and foment bites. Blister with nitrate of silver on groin.

14th.—Leech-bites bled freely. Much pain in region of uterus last night; relieved by poultices on which laudanum had been sprinkled. This morning, about as yesterday. Pulse 96. Lochia not entirely suppressed. Headache. Tongue and mouth rather dry. Skin not hot. Lies on back, with knees drawn up. No dejection for four days. Mixture of 8th, *p. r. n.* Turpentine stupes to abdomen; protect blistered surface.

15th.—Bowels freely open this morning. Lochia entirely absent. Pain, posture, &c., as yesterday. Let six leeches be applied as on 13th. Hot fomentations to abdomen. Evening.—Leech-bites bled freely. Less pain in, and no distension of abdomen. *R.* Hydr. submur., gr. iv., pulv. jalapæ, gr. vi., now, and in two hours some of mixture of 8th.

16th.—Two dejections. Abdominal pain now chiefly confined to left hypogastrium. Some headache. Feels generally easier. Still some milk in breasts. Little or no lochia. P. 96. Bran poultices constantly to abdomen, for which, in the night, for greater convenience, a bag of hot salt was substituted by the advice of Dr. Parks. Continue beef-tea, gruel and toast.

17th.—One dejection. Lochia returned. No pain complained of in abdomen, except when pressure is made over the affected part. Some dysuria. Since morning, has complained of a sharp or shooting pain “in the bone”—as she expresses herself—of the left hip. Vagina cool. Tenderness internally, on pressure, much the same, extending down somewhat into vagina. Swelling less than on 13th. Pulse 96. Three leeches to be applied as on 13th.

18th.—Leeches drew well. Pain of yesterday very much relieved. Dysuria less. Skin cool. Pulse 96.

19th.—No dejection for three days. Blister of 13th not quite healed. Pil. cathart. comp. now and *p. r. n.*

20th.—Two dejections. Pulse 90. Otherwise about the same.

23d.—Pain on pressure internally and externally very much diminished. Very little dysuria. Pulse 84. Has appetite for solid food. May have mutton chop and porter, and citrate of iron and quinine in infusion of columba, thrice daily.

25th.—Has taken and borne medicine and increase of diet well. Feels and looks better.

28th.—Improving. No pain on pressure. No dysuria nor pain in defæcation. Tongue and skin natural. Pulse 84. Takes cathartic pill occasionally. Lochia continue, though scanty.

From this time she gradually recovered, and soon regained her usual health.

REMARKS.—There are two points connected with the foregoing case which I believe to be of some importance.

1st. The continuous use of ether so as not to allow the cerebrospinal centres to wake up, as it were, to the irritant causing the convulsive paroxysm; for it would seem that some condition of this nature really exists.

2dly. The apparently severe antiphlogistic treatment pursued after the pelvic cellulitis declared itself. By all who see the prolonged suffering and broken-down health of a woman the subject of pelvic abscess—which, if detected in season, before suppuration had set in, might have been averted—it will readily be conceded that active antiphlogistic measures are required here if ever in any case

of inflammation. For so long as pain and throbbing, with, in most cases, dysuria, painful defæcation, and neuralgic pains shooting down the thigh, either anteriorly or posteriorly, continue, local depletion, counter-irritation and fomentations are necessary to a greater or less degree. Few cases there are which will not yield to a judicious perseverance in this direction, provided the disease has not already gained too much headway. Though from one to two weeks is the period within which such treatment is generally successful, if pain be present, with tenderness on pressure externally and internally, in a sthenic state of the system the antiphlogistic treatment may be indicated in cases much farther advanced. The importance, however, of a correct diagnosis is scarcely anywhere more necessary than here; and tactile examination *per vaginam* cannot, I believe, be too much insisted upon. Furthermore, if at any time in the course of treatment, pain and tenderness on pressure are complained of in the site of a recently-subdued cellular inflammation, a close estimate should be made of the extent of its cause, in order that no time may be lost to obviate a return of the disease, which to all experience seems but too prone to re-assert itself. Strict observance of the horizontal position is necessary until all pain and tenderness have disappeared, and the bowels and bladder are voided without causing any uneasiness to the patient.

ON THE STRUCTURE AND DEVELOPMENT OF THE VETERBRATE SKELETON.

By PROFESSOR HUXLEY, F.R.S.

IN the course of the preceding ten lectures I have done my best to confine myself to matters of fact, and to the interpretation which directly arises from a very simple method as applied to those facts. The matters of fact have, as far as practicable, been demonstrated before you; at any rate, they are capable of demonstration. The interpretation has rested upon a principle so obvious that it requires no special justification—the principle that those parts in various skulls are identical, and should receive the same names, which correspond in development, and in their relations to the soft parts and to one another. And for myself I confess that with the establishment of those matters of fact, of those direct interpretations, the great object of science seems to me to be largely fulfilled. But in the present condition of anatomical views upon the skull, a course of lectures upon the vertebrate cranium which should be devoid of some commentary upon theories which have been offered of the composition of the cranium would, justly enough, be considered imperfect; because there is a true theory as apart from the speculative hypotheses—there is a true theory, which is simply a generalized statement of the facts which we have found out; and

there are other theories, which add to such generalized statement other considerations, and which may or may not be capable of verification.

That which is commonly understood now by the theory of the skull, is the doctrine that the osseous cranium—it must be borne in mind that the doctrine has gone no further than the osseous cranium—is made up of a greater or smaller number of coalesced vertebræ, and that, to use the accepted phrase, the skull is a modification of the vertebral column. That doctrine originated with a man of vast genius—a man, perhaps, unexampled in the history of letters and of science, as combining, as I think, the highest proficiency in both departments—I mean Goethe. He originated, or rather I should say he invented, towards the end of the last century, the doctrine that the skull is composed of a number of segments, corresponding in their nature with the vertebræ. I am perfectly well aware that this has been controverted. I am well aware that, not only in his own country, where there were personal interests and prejudices coming into play, but even in this country, where no such motives could intervene, the claims of Goethe to this discovery have been disputed; and not only that, but that it has been more than insinuated—and it is with regret I state it—that the grand old poet, at seventy years of age, full of all the honors which his people had conferred upon him, was guilty of the meanness of taking to himself the credit of the doctrine invented by a young and rising professor, ignoring his claims and setting up others which had no foundation. Nay, more: the audacity of the accuser has gone so far as to suggest a certain stupidity, and that even Goethe—this man of vast imagination and undoubted ability—was constrained to invent the same method of accounting for his discovery as that which had been given by Oken. The statement has passed into English literature; it is to be found in a work which will be consulted by all who wish to be acquainted with this matter, and it will doubtless be regarded as an authority—it is to be found in an article upon Oken in the “*Encyclopædia Britannica*.”

What, then, are the facts of the case? Goethe, writing in the year 1820, or thereabouts, has stated that the mode of his discovery of the vertebral composition of the skull was this:—“The three hindermost parts,” says he, “I knew before; but it was only in 1791, when I picked up an old and broken sheep’s skull amidst the sandy dunes of the Jewish cemetery in Venice, that I perceived that the facial bones also were composed of vertebræ; and perceiving, as I did, the transition from the first pterygoid bone to the ethmoid bone and to the turbinals quite distinctly, there I had an *aperçu* of the whole at once.” We shall see that Oken, writing in 1807, also said, and no doubt with perfect truth, that he had been led to his conception of the theory of the vertebrate skull by picking up an old and whitened deer’s skull upon the Hercynian, within

the Hartz mountains; and it has been more than suggested that this statement of Goethe's was a sort of clumsy fabrication imitating the invention of Oken. Happily, the general order of things in this world is tolerably just, and a document which Goethe doubtless had himself utterly forgotten (and which it is pretty clear, by a comparison of dates, he had forgotten) has appeared within the last year or two, which places the veracity of the old poet beyond the reach of the most vigorous and determined assailant. That passage was brought to light by an eminent German author a year or two ago, who says (referring to a correspondence which had just then been recently published between Goethe and the family of Herder, the clergyman and great literary German) Goethe was in the habit of corresponding with these people regularly; and he wrote, among other folks, to Madame Herder. One of his letters has come to light under the date of the 4th of May, 1790, and in that letter is this passage:—"By the oddest happy chance, my servant, by way of a joke, picked up a bit of an animal's skull in the Jews' cemetery at Venice, and, by way of making fun, offered it to me as if he were presenting me with a Jew's skull. I have made a great step in the explanation of the formation of animals." It is quite clear that this is a complete and perfect testimony to the veracity of Goethe when, in consequence of various circumstances that took place, he affirmed that thirty years ago (it was exactly thirty years ago) he had made the discovery to which I here refer. It is to be hoped now that all further detraction, at any rate, will cease on that point. And this detraction was the more unwise because it was wholly unnecessary. No person looking at the history of the past would dream of regarding Goethe, who indubitably invented this doctrine, but who kept it to himself for thirty years—led to that course doubtless by the great difficulties which his vast knowledge and clear judgment showed him were in the way of the application of the doctrine—I say, no one would have been led to set up his claim as a discoverer against that which is justly the right of Oken, who, in the year 1807, in a similar manner to that which happened to Goethe, was led, by picking up an animal's skull in the Hartz mountains, as I have said, suddenly to conceive that the osseous cranium was composed of three segments, and that the three segments answered exactly and precisely to so many vertebræ. No doubt Oken was the first promulgator of this doctrine; to him is all the credit that may attach to it justly due—all the credit that may attach to the definite discovery of the segmentation of the skull. Whatever we may think about his vertebral theory, no one can doubt at all that the merit of the discovery of the osseous segmentation of the skull is indubitably due to Oken; nor has anything been done since which in any way exceeds in merit that first singular paper which he published on the subject in 1807, under the head of "*Ueber die Bedeutung der Schädelknochen.*" It

was his inaugural address on taking the chair at the University of Jena; and to show you how easily this notion may have arisen, I have here that subject which led Goethe to imagine the vertebral theory, and that subject which Oken made use of as the best illustration of it—I mean a young sheep's skull. The parts here have simply been macerated, and otherwise are left free in their natural connection; but you will see that it is perfectly easy, by exercising a little pressure, putting in the first place a knife between the supra-occipital, to separate one segment between the supra-occipital and the parietals, and, putting a knife again between the parietals and frontals, to separate another, and thus to obtain three perfectly distinct osseous segments. It was that which Oken saw in the bleached deer's skull; it was that which very naturally, and as I think very consistently, led him to say (he says the conviction came across him as a lightning flash) that this great skull, which contains the dilated continuation of the spinal marrow, is itself nothing more than a dilated continuation of the vertebral column. In his first essay he is guided entirely by the analogy of the sheep's cranium, and he says that the hindermost vertebra, which he calls the ear vertebra, is composed of the basilar portion of the occipital bones and the two ex-occipitals—the two articular portions, and the supra-occipital; that the next segment is formed by the posterior sphenoid, by the great alæ of the sphenoid, and by the parietals; and that the anterior segment is formed by the pre-sphenoid, by the little orbito-sphenoids, and by the frontals. Use the term segments, leaving the doubtful term *vertebræ* out of place, and there cannot be a doubt that Oken was perfectly justified, and that the fact will remain as he stated it to be for all time, as one which you can always demonstrate in the osseous skull. Then he goes on to say that there is an anterior portion, consisting of the ethmoid, the nasals, and the vomer, and that you can take that away. He is somewhat doubtful as to what is the nature of this; but, at any rate, he suggests as a possibility that the vomer may be in reality the continuation forward of the vertebral axis formed by the pre-sphenoid, the basi-sphenoid, and the basi-occipital; and that perhaps it may represent two or three *vertebræ* coalesced. He appears to be misled by some statement on this subject by an anatomical writer; but that point he leaves open. At first he stands simply by the three cranial *vertebræ*, as he calls them. He says: "You may think, perhaps, that I have forgotten the petrosal bone. Not at all. This petrosal bone is not a vertebra; it contains no parts of one of its vertebral components of the skull; but it is a sensory organ; it is an ossification developed around the organ of hearing which characterizes the formation of that organ, in just the same way as the membranous case around the eye is peculiar to that organ. Therefore you must regard this as something apart from the segments of the *vertebræ*, and look upon it as a sense

capsule—not considering it as entering into the composition of the skull at all.” Having arrived at this notion of the resemblance of the upper arches of the skull to the cavity of the upper arches of the vertebræ in the trunk, the next step was a very simple and very obvious one. Finding in the skull, so far, a perfect resemblance to the vertebral column, Oken, not unnaturally, arrived at the conclusion that the lower arches of the skull—the parts of the face—must answer in some way or other to the parts of the trunk; and carrying out that idea with the boldness which was characteristic of him—indeed, I might almost have said with the rashness which certainly characterized the majority of his later speculations—he said: “If I find the repetition of this upper part of the vertebral column in the skull, I must also find a repetition of the lower part; and as I find there a thorax and abdomen, so I must find a thorax and abdomen in the skull”; and he said that the thorax of the skull was formed by the palatine bones and the adjoining parts, and that the abdomen of the skull was formed by the oral cavity. The idea is not so far-fetched as you might at first imagine. There is the same sort of *à priori* probability about it that there is about the identification of the upper arches of the skull with the upper arches of the vertebral column. By this time the notion of identity of composition as he progressed appears to have taken full possession of his mind, and he said to himself, “If we can find the upper and lower arches of the trunk in the head, we ought to be able to find the limbs.” And, totally undeterred by the difficulties which would have suggested themselves to a man of less daring in this matter—and those difficulties which, as I believe, kept Goethe from promulgating his doctrine—he said: “I will find all these parts. There is the shoulder-blade of the head in the squamosal bone; there is the arm of the head in the jugal apparatus; and there is the hand of the head in the upper maxilla; and there are the fingers of the head in the teeth; and there is the thumb of the head in the pre-maxilla.” If you had asked Oken how he knew that these were fingers and thumbs, and so forth, he would probably have been puzzled for an answer. He would have told you that the idea dominated over all these things, and that that great perception of an archetype, which was perceived only perhaps by the man of genius, could not be seen by inferior people who were simply looking at the facts; and he said, therefore, that the arm of the head was attached to the side of the head, fixed to it, and that the two hands of the head were, so to speak, expanded to the sides of the nasal capsule. Where, then, were the legs of the head? Nothing daunted, Oken said that they were to be found in the lower jaw, and that the teeth of the lower jaw were the toes of the head in the same way, and that the hyoidean apparatus was nothing more nor less than the pelvis of the head. One would have thought that the difficulty of finding two legs of the head attached to scapulæ of the

head here was rather a strong one; but Oken has an answer for all these matters. It is not worth while to enter into them largely now, having other things to attend to. It does not seem to have entered his mind that for anything like scientific speculation you must have a criterion of the truth or falsehood of what you say, and that unless you have some such criterion, you can go on inventing theories and counter-theories until Doomsday, every one of which shall be just as good as every other. A few years afterwards, Oken enlarged his idea by regarding the nasal apparatus as a fourth vertebra, and thus arose that view of the skull as composed of four coalesced vertebræ, which has formed, without any considerable or material alteration, the basis of every speculation that has been published since. In this way Oken founded a school. His ideas were received with open arms in Germany, and his contemporaries, some of them, carried to a wonderful pitch the wildnesses—I had almost used a stronger word—with which the ingenious speculations of Oken are, to a vast extent, mixed. These, like Spix, for example, propounded the most extraordinary notions of the composition of the skull— notions which one must acquaint oneself with as a matter of history; but when one has done that, the best thing to do is to forget them, and to think of them no more. Others, more judicious, more accurate in thought, like Bojanus, enlarged the doctrine in other directions; but altered nothing, added nothing whatsoever to the method of Oken, but simply shifted backwards and forwards the lines of interpretation which he had suggested. By degrees the notion spread in France, or rather I should say that it had an independent origin there to a certain extent, partly depending upon an interchange of ideas with Germany, partly arising as the result of the development of notions which Geoffroy St. Hilaire propounded in France upon the unity of organization, and so forth. Thus further modifications were produced, some admitting three vertebræ, some making out that there were four, some that there were six, and some that there were seven; but the character of the reasoning and the method of the interpretation were not one whit changed from that which was invented by Oken.

In England, again, we have had our own propounders of similar theories. I do not know that anything which I have said about Geoffroy St. Hilaire and about the Germans does not equally apply to them. I am quite at a loss to find in our English speculations any advance whatsoever upon the method, or in the main upon the facts, of Oken. If it is absurd, without good evidence, to talk of the jugal apparatus and the squamosal apparatus, and the upper jaw, as being the arm of the head; it is at least as absurd, without equally good evidence, and upon mere fantastical grounds, to regard the arm as a rib of the head. The one notion has exactly the same value and scientific standing as the other, and if the transpo-

sitions of Oken shock the mind, not less do those who are accustomed to the study and careful interpretations which result from embryology feel astounded in having to believe that the appendage of the atlas has, somehow or other, got in front of the rib of the occipital bone, and thus given rise to the position of the parts as we find them. My business, however, is not to enter into a criticism of these theories, but simply to show what is their scientific position.

In France, however, and in England, there have been great exceptions to these mere blind developments of the notions of Oken. In France the enormous knowledge and accurate thought of Cuvier kept him from drifting into such conceptions. He admitted, as all must admit, that there was a segmentation of the skull; but the moment these notions of the vertebration of the skull were proposed, he said, "I want evidence; I want a criterion. It is of no use talking to me about the relative repetitions, shifting backwards and forwards, and all the rest. I want to know something which shall prove to me that these processes really do take place, or I will not accept your interpretation." Therefore Cuvier always held aloof from the vertebral doctrine, and I confess for myself I fully sympathize with those occasionally somewhat bitter sarcasms with which he overwhelmed the advocates of those notions, pernicious to everything like accuracy of thought, in his "*Ossements Fossiles*," and his "*Histoire Naturelle des Poissons*." In this country, again, there has been another exception. I allude to Professor Goodsir, of Edinburgh, and the able young men who have risen from his training. He is the only man, so far as I know, either on the Continent or here, who has understood the value of that which took place between 1837 and 1840, or thereabouts, in Germany (of which I shall have to speak presently), and has endeavored to correct the errors of the merely Okenian line of speculation by the severe criteria of embryology. What was it, then, that took place between those years, 1837 to 1840, in Germany. It was a revolution in method—it was the discovery of that criterion for the want of which this wild and waste method of speculation upon the nature of the skull had originated. At about the period to which we refer, Reichert and Rathke, two men whose names must always be mentioned with the profoundest respect in connection with the skull, commenced their embryological researches, and instead of confining themselves to the easy task of sitting upon their chairs and speculating backwards and forwards as to how the bones of the skull should be fitted together, like a child's puzzle, they set to work to ascertain how they had really come, and by the most laborious and difficult studies of development, to see in what manner the complex adult skull had arisen from its early state, and how, by tracing back the methods of development, by tracing back every skull to that early condition in which it resembles every other skull, you are

able to identify the precise places at which each bone arose, and so to eliminate from your mind the mystifying influences of subsequent change. These men—Reichert, by his discovery of the visceral arches, and by his wonderful study of their modification; Rathke, by his investigations in comparative embryology, and his still more remarkable discoveries, as I think, into the true nature of the base of the skull, and the mode of its production—these men founded an absolutely new epoch and a new method; and for me any work which has been published since that time, and which contains no reference to the labors of these men and ignores them, is on exactly the same scientific footing as a treatise on astronomy written at the present day which should ignore the discoveries of Newton; it is an anachronism, has no scientific place, and is unworthy of consideration.—*London Lancet*.

TEST FOR OLIVE OIL.

It is a well-known fact that the olive oil sold in America and elsewhere is very seldom pure, but mostly adulterated with other cheap vegetable oils. M. Hauchecorne, chemist, of Yvetot, France, has, however, just discovered an easy method of detecting such frauds. M. Hauchecorne's test is oxygenized oil, which may be had at any chemist's, and is a colorless liquid. The method of using it consists in pouring a portion of the oil to be tested into a graduated tube, by which the volume of the liquid is ascertained at a glance. To three volumes of olive oil one volume of oxygenized oil is added, and the whole well shaken. After a few seconds the mixture will become green, if the oil is pure olive. No other oil will do so. Poppy oil will assume a rose color with the test; oil of sesamum will turn bright red; oil of arachis turns yellowish gray; and beech-nut oil takes the color of ochre. These are the oils most commonly used to adulterate olive oil. When the latter is pure, the green tint appears instantaneously; but if adulterated, the liquid must stand three or four minutes before the color, whatever it may be, appears. Even the quality of the olive oil, when pure, may be tested in this way. Thus, an apple-green color shows that the olives employed were too ripe. A light green denotes oil obtained from a mixture of olives of different qualities, but none of them spoilt. The olive oils of Nice, Port Maurice and Genoa belong to the former sort; those of Aix and Grasse to the latter.—*Medical and Surgical Reporter*.

CRUST OF BREAD.

M. BARRAL has presented to the Academy of Sciences some remarks of much interest concerning the crust of bread and the gluten con-

tained in it. He has recently shown that, when equally dried, the crust of bread is more highly azotized than the crumb; and he also showed that the crust was more soluble than the crumb in water. M. Payen had, it is true, previously pointed out this greater solubility of the crust, and had ascribed it to the conversion of the starch into dextrine during the baking. But M. Barral's experiments show another important fact. "If," he says, "we exhaust with water an equal quantity of dry crust and dry crumb of bread, we find that the soluble portion of the crust consists of from 7 to 8 per cent. of nitrogen, whilst the soluble portion of the crumb contains only from 2 to 3 per cent. The greater solubility of the crust, consequently, depends upon the transformation which its gluten has undergone under the direct action of the 200° to 220° heat of the oven. The soluble portion of the crust is more highly azotized than the juice of meat." M. Barral added, that he was still engaged with his experiments, which he hoped would throw some new light on panification.—*British Medical Journal*.

EFFICACY OF SESQUICHLORIDE OF IRON FOR THE TREATMENT OF ULCERS ABOUT THE NAILS.

M. BILLON communicates the following to the *Journal de Méd. et de Chirurgie*:—

Dr. Gaillet, of Luynes (Indre et Loire), having recently published a case in which the application of sesquichloride of iron effected a cure of the affection popularly termed *the growth of the nail into the flesh*, I take this opportunity of recording several instances of the same kind, witnessed by myself, which confirm the results obtained by M. Caillet, and may, perhaps, be deemed not wholly uninteresting. In 1858, Dr. Wahu, staff-physician to the army, having succeeded with this remedy in curing the painful diseases in question, I resorted to the same method, and with the greatest benefit in four cases. I may here remark that ulcers about the nails are occasionally observed among our soldiers, having escaped the attention of the medical boards, or being caused by the pressure of the boot during forced marches. Under these circumstances, a *prompt* and *painless* cure may be effected by inserting the *dry* sesquichloride between the nail and the protruding flesh, and powdering the latter with the same substance. A large bandage should be applied over all, not impregnated with the *liquid* sesquichloride of iron, as recommended by Dr. Caillet, a precaution which may, however, be useful, as the folds of the band dry rapidly, and preserve their situation in a more exact manner.

On the following day, the exuberant flesh is found to have acquired the hardness of wood; suppuration speedily ceases, and a cure follows after two or three applications. This simple and mild

treatment is obviously far preferable to the numerous surgical procedures hitherto recommended. In the course of four or five days, in a week at the farthest, the original pain ceases, the swelling subsides, and the patient is able to walk. Naught remains but the hardened protruding flesh, which falls away about a month after the application of the sesquichloride of iron. These are the results yielded by the method in four soldiers suffering from the growth of the nail into the flesh. They have appeared to be sufficiently remarkable to warrant the communication.

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Functions of the Choroid. *New Theory of Vision.* Brown-Séquard's Journal Phys. 4 tome. No. 15. Juillet, 1861. P. 462.

Prof. Ch. Rouget. Extrait de la Notice sur les travaux de l'auteur, publié en Juin, 1860.

ALL physiologists admit that images of external objects are painted on the retina as on a screen, and that the essential purpose of the choroidal pigment is to prevent all reflection of the rays. But the retina does not present the conditions of a screen. During life it is as transparent as the media of the eye, the crystalline or the vitreous body, and like them allows the rays to pass through it, which are stopped only by the surface of the choroid. There the rays are not absorbed, but reflected, in the normal condition of vision of all the vertebrates. This reflection of light from the bottom of the eye is beyond dispute. Desmoulins had, in an excellent memoir (too little appreciated), already called attention to the number of species of animals in whom was noticed this peculiar metallic lustre which characterizes the tapetum. These animals generally enjoy very acute vision, even in a feeble light, and we may at least conclude that the reflection of the images from the bottom of the eye does not at all trouble vision, as has been theoretically supposed.

But is this an exception peculiar to animals furnished with a tapetum, and the conditions of acuteness of vision, are they absolutely different in other vertebrates where the choroid is present, and instead of a reflecting surface is there one carpeted by black pigment, and supposed to be intended to prevent all reflection of light? In likening the pigmentary layer of the choroid to the blackened surfaces of optical instruments, it has been forgotten that it is not only the black color, but rather the roughness and the innumerable irregularities of its surface which give this black plaster its capacity of absorbing luminous rays. A black surface perfectly smooth and polished, an even layer of black varnish, reflects very decidedly. In optics quite perfect mirrors are made by covering one of the surfaces of a polished plate of glass with blacking.

Now these are precisely the conditions seen in the posterior segment of the eye, where the choroid is spread upon the posterior surface of the retina, a transparent layer, in a curve perfectly smooth and even.

On the surface of the anterior segment of the choroid, the pigment,

generally of a much deeper tint, covers a very irregular surface, the delicate and numerous folds of the ciliary region and the posterior face of the iris, and here it is really so placed as to hinder a second reflection of the rays already once reflected at the bottom of the eye.

Thus in the animals provided with a tapetum, the bottom of the eye acts as a concave mirror of glass tin-foiled. In animals where the black pigment of the choroid takes the place of the tapetum, the bottom of the eye represents a glass mirror with one of its surfaces blackened. In both cases direct experience proves that luminous rays proceeding from external objects are reflected at the bottom of the eye.

Are the elements of the retina impressed by the direct rays, as is generally admitted, or by the reflected rays, or by both at the same time? Sensations perceived are always referred to the terminal extremity of the nerves. The nerves of sensation all possess at their terminal extremity a peculiar apparatus destined to receive the special impression which each of them sends to the centre of perception. The rods constitute for the termination of the optic nerves the special apparatus destined to receive the concussion of the luminous undulations.

In the eyes of the invertebrates the little organs analogous to the rods, attached to the extremity of the optic nerve, have their terminal surfaces turned outwards. They hence receive the impression, as in the case of the other nerves, by their free extremities. In the eyes of vertebrates, the free surface of the rods is turned in a direction inverse to that in which the luminous rays from external objects come. The direct rays, which pass through without impressing the nerve-tubes lying above in the internal layers of the retina, arrive at the surface of contact of the rods and the choroid. There they are reflected, and the optical centre coinciding with the centre of curve of the retina, the reflection takes place in the direction of the axes of the rods. Through this reflection the terminal extremities of the optic nerves in the vertebrates receive the luminous impression on their free surface, as in the invertebrates.

When the retina is to a certain extent deprived of its lining of choroidal cells, by the falling or throwing off of these cells, the reflection of the luminous rays becomes impossible, and the power of vision is lost at the points corresponding to this alteration. B. J. J.

Manual of Instructions for Military Surgeons, on the Examination of Recruits and Discharge of Soldiers. With an Appendix, containing the Official Regulations of the Provost Marshal-General's Bureau, and those for the formation of the Invalid Corps, &c. &c. Prepared at the request of the United States Sanitary Commission, by JOHN ORDRENEAUX, M.D., Professor of Medical Jurisprudence in Columbia College, New York. New York: D. Van Nostrand. Pp. 238.

THIS handsome little book, so well explained by its title, contains in a concise and clear form nearly everything which an examining surgeon should bear in mind in the discharge of his duties. It forms a handy substitute for the pile of larger treatises on military jurisprudence which he might feel the necessity of consulting at any moment, and is arranged in sections according to regional anatomy, so as to render reference very easy. The author has made free use of the French code of instructions in its preparation, and has performed his work in a highly creditable manner.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, OCTOBER 22, 1863.

NEED OF AN AMBULANCE SYSTEM.—It would seem that evidence enough has been presented on this subject to make it perfectly plain to the most common understanding, that this need continues to be one of the most pressing wants in the organization of our armies. The somewhat personal discussion which has grown out of it has elicited facts of the most startling character, showing that an untold amount of suffering continues to be caused by the want of a complete, efficient, authoritative ambulance organization. Of course, since the movement to interest the public mind on this subject was first started here in Boston by Dr. Bowditch, the very necessity of the case has led to some provision of this kind. Such flagrant outrages as he exposed could not be repeated in a civilized land without bringing upon it an overwhelming reproach. The humanity and thoughtfulness of corps commanders also, would, in proportion to their endowment with such qualities, lead them to make as full provision as lay in their power for the care of the wounded. It is admitted that a somewhat elaborate system has thus grown up, but with all its statistics of numbers of men and vehicles the defect in it is that it is not practically available to the extent to which it should be, for the simple reason that it is not based on legal enactment. It is asserted by its defenders that not only in the Army of the Potomac, but in the Department lately under the command of General Foster, this organization is complete. Now, it happens that we have recently conversed with an officer who, until within a few months, served in that Department, and was in close proximity to General Foster during most of his term of service, taking part in many of the actions fought under him; and he assured us in the most pressing manner that there was nothing like such an organization at any time under his observation. He spoke with great earnestness of the urgent need of such a system in that Department, saying that the men in the ranks fully realized it, and that it would be an encouragement of incalculable value to them if they could feel sure of being taken proper care of when wounded on the field of battle. When informed of the movement on foot to endeavor to establish such an organization on a basis of law, he could hardly find words to express his delight at the prospect, and he subsequently told us that the joyous thought of it had actually disturbed his rest at night. Our informant we know to be an honest, reliable man. As for the Army of the Potomac, so recently as the battle of Gettysburg, the following, from Dr. Bowditch's reply to Senator Wilson, shows how the existing system worked on that occasion:—

“Another surgeon, who entered the army early in the war, only a few days since sarcastically smiled when I asked him what he thought of the ambulance system in the Army of the Potomac. ‘The system,’ he replied, ‘if you can call it such, is as bad as bad can be. At the battle of Gettysburg I carried off all my men upon muskets and the blankets of unwounded soldiers. I could not get any of the ambulance department near me.’ A third officer—a Colonel—replied to a similar question: ‘The ambulance system, as it at present exists, is a *nuisance*.’

‘Why so?’ I asked. ‘Because,’ he replied, ‘it promises well, but has failed in performance, whenever I have wanted it. And as for the ambulance carriages, I would as soon die at once as ride, when wounded, in one of them; driven furiously, as they often are, by rough drivers over a corduroy road. I am sure some men must have died in consequence of such treatment.’ This gentleman has been, from the first, and is now, a prominent officer in the army.

“In conclusion of this part of my subject let me state two recent facts from Gettysburg. Both of them occurred to gentlemen living very near my home, but not members of my family. These two admirable officers and men were wounded mortally. One of them lay for a long time unattended, and finally was carried off on a shelter tent borne by soldiers. No ambulance or stretcher came near him, and with immense suffering he contrived to get home to die among his friends. The other died more early after the wound. He was carried off by his own men, and, fortunately for him, no ambulance but a *common cart* bore him to a place of comparative safety, where he died. This latter was a staff officer, and one whose private and public virtues would have called out the sympathies of all. He could not obtain aid from this vaunted ambulance corps of Mr. Wilson.”

We have, also, evidence of the insufficiency of the present organization, from the report of Mr. Olmsted of the operations of the Sanitary Commission during the campaign of June and July last, published in the *Sanitary Reporter*. He says:—

“The wounded now began to be brought from the field to the railroad for removal to fixed hospitals elsewhere. As they arrived much faster than they could be taken away, they were laid on the ground exposed to the rain, or to the direct rays of the July sun, without food. This having been anticipated and provided for by the Commission’s agent in Baltimore, on the second day the Commission had a complete relief station, on a large scale, in operation, at the temporary terminus of the railroad. It consisted of several tents and awnings, with a kitchen and other conveniences. From that time to the present, from one to two thousand wounded men have been fed at this station daily, and from one to two hundred furnished with beds at night.”

This was on the 6th of July, two days after the battle. Can an ambulance organization be complete which is unable to remove thousands of wounded men two days after a battle, and leaves them on the bare ground without food, to be saved from actual death by exposure and hunger only through the tender ministrations of this great public charity?

It is very evident that personal feeling has a good deal to do with the opposition which has sprung up to this great movement in favor of a more complete and efficient ambulance organization. The strong current of public sentiment must break down all such opposition. We sincerely hope and believe that the petitions now circulating throughout the country in favor of such a system, will bear with them to Washington such a burden of signatures that no public man will dare to oppose them.

SOME idea of the immense labors of the Sanitary Commission may be got from the following list of articles supplied to the Army of the Potomac immediately after the battle of Gettysburg, which we find in the report of Mr. Olmsted, published in the *Sanitary Reporter*:—

“The following is an incomplete statement of the quantities of the principal articles distributed by the Commission to the wounded upon the field at Gettysburg, during the ten days following the battle. The perishable articles (amounting to over 60 tons) were taken to the ground in refrigerating cars. A considerable quantity of the same articles, purchased from or contributed by farmers about Gettysburg, is not included in this statement.

"Of drawers, shirts and other hospital body-clothing, 39,884 pieces, being equal to full suits of clean bed-clothing for ten thousand wounded men.

"Of beds, sheets, blankets, comforts, pillows, cushions for wounded limbs, and musquito nets, 11,700 pieces, being equivalent to a complete bed equipment for eighteen hundred men, severely wounded.

"Of bed utensils	728	Water coolers,	46
Towels and napkins,	10,000	Bay rum and Cologne,	100 bottles.
Sponges,	2,399	Fans,	3,500
Combs,	1,500	Chloride of lime,	11 barrels.
Buckets,	200	Shoes and slippers,	4,000 pairs.
Soap, Castile,	250 pounds.	Crutches,	1,200 pairs.
Oiled silk,	300 yards.	Lanterns,	180
Tin basins, cups, &c.,	7,000	Candles,	350 pounds.
Old linen, bandages, &c.,	110 barrels.	Canvas.	300 sq. yds.
Water tanks,	7		

OF ARTICLES OF SUSTENANCE, VIZ. :

Fresh poultry and mutton,	11,000 pounds.	Tamarinds,	750 gallons.
Fresh butter,	6,000 pounds.	Lemons,	116 boxes.
Fresh eggs (chiefly collected for the occasion at farm-houses in Pennsylvania & New Jersey),	8,500 dozens.	Oranges,	46 boxes.
Fresh garden vegetables,	675 bushels.	Coffee,	850 pounds.
Fresh berries,	48 bushels.	Tea,	426 pounds.
Fresh bread,	10,300 loaves.	White sugar,	6,800 pounds.
Ice,	20,000 pounds.	Syrups (lemon, &c.),	785 bottles.
Concent'd beef-soup,	3,800 pounds.	Brandy,	1,250 bottles.
Concent'd milk,	12,500 pounds.	Whiskey,	1,168 bottles.
Prepared farinac. food,	7000 pounds.	Wine,	1,148 gallons.
Dried fruit,	3,500 pounds.	Ale,	600 gallons.
Jellies and conserves,	2,000 jars.	Biscuit, crackers & rusk,	134 barrels.
		Preserved meats,	500 pounds.
		Preserved fish,	3,600 pounds.
		Pickles,	400 gallons.
		Tobacco,	100 pounds.
		Tobacco pipes,	1,000

COMMUNICATIONS OF THE MASSACHUSETTS MEDICAL SOCIETY.—The annual publication of the Massachusetts Medical Society, for the present year, after much unavoidable delay, has just been issued, and will be sent at once to all members who have paid their annual assessments. It contains the excellent Address of Dr. Morrill Wyman, delivered in Pittsfield in June last, and the Proceedings of the Councillors and the Society at their respective meetings, with a Supplementary Catalogue of Fellows admitted since June, 1854. An unfortunate omission, we are requested by the Recording Secretary to state, occurs in this latter department. The names of new members, which are fully and correctly reported in the "Proceedings," are here given but in part—many of the names, by some oversight, not having been handed in to the Secretary, and the two lists not having been compared in passing through the press. As this is not a permanent catalogue, the omission is not so of great consequence, but is still much to be regretted, and thought to require this public explanation.

WE have seen an ingenious bed, contrived by Dr. Josiah Crosby, of Manchester, N. H., intended to obviate the danger of bed-sores or expedite their recovery where already existing. It may be described as an ordinary mattress set in a box, which, by means of a crank and

cog-wheels, can be depressed or raised and kept at any desired point. Above this is a fixed frame, with a number of broad belts of canvas stretched across it from side to side, and buckled at the ends. In ordinary use the mattress and straps are in contact. When it is desired to take off pressure from any part, the mattress is lowered, leaving the patient upon the straps; then by removing the strap or straps beneath the part pressed upon, he is at once relieved. This arrangement also admits of the use of the bed-pan in cases where it is desirable not to move the patient.

BOSTON DISPENSARY—STATISTICS FOR THE YEAR ENDING OCT. 1ST, 1863.

NEW PATIENTS.			
<i>Central Office.</i>		<i>Districts.</i>	
<i>Medical</i> —Men, - - -	1,278	Men, - - - - -	1,514
Women, - - -	3,980	Women, - - - - -	3,771
Children, - - -	3,438	Children, - - - - -	4,364
Total, - - -	8,696	Total, - - - - -	9,649
<i>Surgical</i> —Men, - - -	727	<i>Central Office and Districts.</i>	
Women, - - -	983	Men, - - - - -	3,519
Children, - - -	1,285	Women, - - - - -	8,734
Total, - - -	2,995	Children, - - - - -	9,087
<i>Medical and Surgical</i> —Total,	11,691	Total, - - - - -	21,340

OLD AND NEW PATIENTS.			
<i>Central Office</i> —Medical, - - - - -	-	-	20,367
“ “ Surgical, - - - - -	-	-	6,231
Total, - - - - -	-	-	26,598
Average daily attendance, - - - - -	-	-	85
<i>Districts</i> —Births, - - - - -	-	-	214
“ Deaths, - - - - -	-	-	250

NEW PATIENTS.			
<i>District.</i>	<i>Physician.</i>	<i>District.</i>	<i>Physician.</i>
1.	Charles C. Street,	6.	John Hart,
2.	John W. Hinkley,	7.	Thomas H. Hoskins,
3.	Dewey K. Warren,	8.	William E. Rice,
4.	Henry L. Shaw,		
5.	Charles K. Wheeler,	Total,	9,649
Total number of prescriptions,		- - - - -	40,597

Central Office—Attending Physicians and Surgeons.*Physicians.*

J. B. Upham.
J. N. Borland.
A. D. Sinclair.
S. L. Sprague.
H. K. Oliver, Jr.
S. W. Bowles.
J. C. White.

Surgeons.

Wm. W. Morland.
C. D. Homans.
D. W. Cheever.
Algernon Coolidge.

Dentist—James H. Drummond.

Apothecary—A. K. Carruthers.

Assistant—J. T. Dredge.

Consulting Physicians—Jacob Bigelow, P. M. Crane.

“ *Surgeons*—S. D. Townsend, J. Mason Warren.

HOWARD F. DAMON, M.D., *Superintendent.*

THE *Chicago Medical Journal*, in publishing our story of the munificent bequest a few years since to one of our professional brethren, says, "the bequest certainly is voidable on the ground of insanity in the testatrix." We have not heard that any such claim has ever been set up here; an attempt, however, was made to break the will by certain parties claiming to be legal heirs, but the attempt was unsuccessful.

SURGEON-GENERAL HAMMOND.—The enemies of our estimable Surgeon-General have gladly seized upon the announcement of his being ordered on a tour of inspection at the South as equivalent to a removal from the office which he so worthily fills. There are crying evils in that direction which have long needed correction, and we cannot doubt his visit will be productive of great good. We should as soon think of interpreting an order to an army inspector to visit a distant post as proof that he is in disgrace, as of so construing the southern tour of the head of the United States Medical Department. We hope the day is far distant when the nation shall be deprived of the services of so meritorious an officer. The following is the order to the Surgeon-General:—"The sanitary condition of the Department of the South and Gulf requiring special attention and care at this time, it is ordered:—That Surgeon-General Wm. A. Hammond proceed by the first steamer sailing from New York to Hilton Head and Charleston Harbor, thence to Key West and New Orleans. He will establish his headquarters in the Department of the Gulf until further orders, giving his special personal attention to the medical branch of the service in that Department and in the Department of the South, securing the adoption of the proper sanitary measures required for the preservation of the health of the armies in those Departments. He will report to the Secretary of War every ten days."

ADVICE TO MEDICAL STUDENTS.—Next to a knowledge of the profession, or even before it, the way to succeed in medicine is to possess a knowledge of human nature. That is to be got by living in public; by incessantly mixing with your fellow-creatures, watching their peculiarities, imitating their excellencies, avoiding their foibles, and behaving yourself with truthfulness, frankness, generosity and plain dealing. Shy men do not get on well in the world, nor do absent men, nor do people with a reserved and distracted air, nor slow, awkward men, nor people who hedge, and trim, and potter, and never give a plain answer to a plain question, and never seem able to form a positive opinion and stick to it. But the sovereign cure for all these infirmities is the course we recommend. Verify all facts by your own senses; never be a mere book-worm, and never prefer solitude to good society.—*London Medical Times and Gazette*.

THE British *Medical Journal* raises the following pertinent inquiry relating to vivisections:—

"A noble lord, and, if we are not mistaken, a keeper of foxhounds (which sporting position may he long maintain!), is at the head of the Royal Society for Protection of Animals; and many honorable sporting gentlemen also support it. Now, the object of the Society is, as we understand it, to put down, as far as it may, all unnecessary pain

which may be inflicted on animals; and, under this head, vivisections are denounced. Are these gentlemen, then, and this noble lord, ready, on the principles which they advocate, to put down their guns and their foxhounds? They are bound to do so on their own principles, if consistent. We have no hesitation in asserting that more pain (and manifestly unnecessary pain) and suffering is produced in animals by the gun of the sportsman on the 12th of August, the 1st of September, and the 1st of October, than is occasioned in any twenty years of vivisections, as practised in this country. The fact is obvious, and readily comprehensible to any one who will give the facts of the case due consideration. Out of every hundred animals shot at, a certain percentage get away *wounded*. What is meant by the term *wounded*? Why, simply this: that the animal has been vivisected by the shot which struck it; and that, according to the nature of the part so cut up, will the pain of the animal be great or small, of short or long duration. A hare goes off with a broken leg, the two sharp ends of the bone sticking through the skin; and he may live for days in this state, and even recover from it. What vivisectioning process of the physiologist can be compared with the pain inflicted on this animal by the shot of the sportsman?" * * * The physiologist has this to say, which gives him an infinite superiority over the sportsman: he experiments with the object of relieving human suffering, and he operates whilst the animal is under chloroform. The sportsman has no other object than amusement in the business."—*Am. Med. Times*.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 17th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	36	55	91
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.5	38.3	73.8
Average corrected to increased population	00	00	80.87
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
12	5	1	9	0	1	2	9

PAMPHLETS RECEIVED.—Records of the Eleventh Annual Meeting of the Maine Medical Association.—Annual Announcements of Rush Medical College, Medical School of San Francisco, and the Philadelphia Dental College.

MARRIED.—In Newport, R. I., Oct. 13, J. W. Dowling, M.D., to Miss Fannie A., daughter of L. A. Dowley, Esq.

DIED.—In St. John, N. B., Sept. 25th, of consumption, after an illness of nine years, Charles E. Hathaway, M.D., of the College of Physicians and Surgeons, New York, 29.

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 17th, 91. Males, 36—Females, 55.—Accident, 2—inflammation of the bowels, 1—disease of the brain, 1—bronchitis, 3—cancer, 1—cholera infantum, 9—consumption, 12—convulsions, 3—croup, 5—diarrhoea, 6—diphtheria, 3—dropsy, 1—dropsy of the brain, 4—drowned, 1—dysentery, 1—scarlet fever, 1—typhoid fever, 2—disease of the heart, 3—infantile disease, 3—congestion of the lungs, 1—inflammation of the lungs, 9—marasmus, 3—paralysis, 2—premature birth, 1—scrofula, 1—suicide, 1—unknown, 8—whooping cough, 3.

Under 5 years of age, 50—between 5 and 20 years, 5—between 20 and 40 years, 16—between 40 and 60 years, 13—above 60 years, 7. Born in the United States, 69—Ireland, 16—other places, 6.

THE

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No. 13.

ON THE EMPLOYMENT OF ANÆSTHETICS IN OBSTETRIC MEDICINE AND SURGERY.

BY HORATIO R. STORER, M.D., OF BOSTON, SURGEON TO THE PLEASANT STREET HOSPITAL FOR WOMEN.

[Read at the Annual Meeting of the Massachusetts Medical Society at Pittsfield, June 17th, 1863, and communicated for the Boston Medical and Surgical Journal.]

PREFATORY NOTE.—In the present communication I have purposely refrained from any detail of cases and from reference to the individual experience of others, however corroborative of my own; having endeavored to present the whole matter tersely and in a way to compel, I trust, its thorough experimental test and trial by my professional brethren. Inasmuch, however, as evidence has been presented to me since the paper was read, tending to prove that certain gentlemen among us, held to be expert in this matter, either know nothing whatever, comparatively or positively, of the obstetric use of chloroform, or that they undertake as judges to condemn such use on the part of others, or that they consider the whole subject of too little novelty or importance to be discussed where in practice anæsthetics are seldom resorted to in midwifery, I will merely mention the experience of one or two of my friends in this country, their names being of great weight among American obstetricians. Prof. Henry Miller, of Louisville, Ky., informs me that he has now used chloroform in more than two thousand cases of labor, in every instance with the happiest result; Dr. Mack, of St. Catharines, C. W., a gentleman of equal eminence and nearly as extended practical experience, states to me that he has had the same success; and Dr. Jackson, of Quebec, the esteemed Professor of Obstetrics in Laval University, corroborates my favorable opinion of the agent by his own. I could present a mass of similar testimony, and should have done so had I deemed it necessary; but my business at this time is not with statistics, which are said, if shrewdly used, to prove almost anything we may desire, but to remove certain prejudices which have hitherto very widely obtained. As to whether or no, on the large scale, I am to succeed in this, I can only judge from the personal admissions of many physicians who are already familiar with the contents of this paper by having heard it read at Pittsfield, and from letters of similar purport now in my possession from gentlemen of such standing in the profession as Dr. Josiah Bartlett, of Concord, the present President of the Massachusetts Medical Society, and Dr. Alden March, of Albany, the present President of the American Medical Association. The question of relieving or not relieving the pangs of childbirth, by the only agent in all respects fitted for this purpose as yet known, of assisting or not assisting a lingering labor, of preventing or not preventing a threatened maternal or foetal death, is one that must com-

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mend itself to every physician's conscience as of sufficient importance to demand a personal and practical trial.

In ordinary surgical practice it would be viewed as cruel, if not decidedly wrong, to perform an operation without the previous induction of anæsthesia. This, however, is as yet often considered unsafe, unnecessary or unadvisable in obstetric practice, and in midwifery especially its aid is in this region, as a general thing, still withheld. In behalf, therefore, of those whose sufferings in the imperfect or abnormal performance of their peculiar function are doubtless far more exquisite and agonizing than we as men can possibly realize, I would claim precisely the same propriety and the same necessity for the use of anæsthetics in obstetrics as is now acknowledged in other and general practice.

The subject is one with which I happen to have been brought into peculiarly close relations; for the past eight years, and by a large circle of medical friends, I have been importuned to state my convictions regarding it. I am satisfied that there exist several important and very prevalent errors, and in speaking decidedly it will be from extended personal experience.

Various objections have been brought against the employment of anæsthetics, but it will be found that their use has been advanced by the very arguments relied upon by their opponents. Many of these being upon their very face absurd, I shall notice only those that are in any degree plausible.*

It has been asserted—

1. That anæsthetics are hazardous to life;
2. That they have a tendency to develop immoralities, alike
in operator
and patient;
3. That it is unnecessary to abrogate pain, a natural phenomenon;
4. That to do so is controversial of Scripture; and
5. That their use is liable to produce subsequent ill effects upon the immediate or remote health of the patient.

Of these objections, two apply to the general use of anæsthesia, and the last three more especially to its employment in midwifery; though the last of them all, that involving a subsequent deleterious influence, to a certain extent has a general bearing. As to the first of them, which, with the exception of the last, is really the only one deserving serious consideration, it will be noticed that the argument applies with different force to ether and chloroform, the two anæsthetics

* Several of the groundless objections above referred to have again been urged upon the profession by Dr. Johns, of Dublin, in an article I had just received at the time this paper was read. They were of such a character, I thought, as hardly to need refutation, and therefore did not directly allude to them. Inasmuch, however, as they have now been reproduced in one of the leading medical periodicals of this country, I will here refer those especially interested to my answering article in the same journal in which they have appeared, namely, *The Boston Medical and Surgical Journal* for August 20, 1863, p. 49.

generally employed; and to these again, with still other degree, as they may be resorted to in midwifery or for the other purposes of obstetric medicine or surgery.

I shall return to these points, and now merely state in answer to, first, the general objection that anæsthetics are hazardous to life;

a. That anæsthesia is no more hazardous than other measures acknowledged by the profession to be not merely justifiable, but absolutely necessary; and

b. That its use is often less hazardous than its absence.

To the second objection no more weight attaches than as regards the use of any narcotic or stimulant.

To the third, which covers the use of anæsthetics in labor, we reply that pain is of itself an evil, and of itself depresses the vital powers; that delays are here always dangerous to the life of either mother or child; that a naturally painless labor is almost never seen, and that to shorten the average duration of labor is to annually save tens of thousands of lives now sacrificed.

The fourth objection applies equally to the whole practice of obstetric medicine and surgery, and therefore though it could be logically disproved, it needs no further reply.

The last objection to which we have referred, is based upon a belief that the use of an anæsthetic renders the patient, in general practice, more liable to affections of the circulation or nervous system, and in labor predisposes her to post-partum hæmorrhage, &c. There is no doubt of this liability when the agent is an improper one or unskilfully administered, and it is to the frequency of such instances that we may fairly attribute the prevalent opinion. On the other hand, I do not hesitate to assert that, under other circumstances, no such fear need be entertained. As far as regards the possible sequelæ of child-bed, it will be seen that anæsthetics, when properly exhibited, increase the force of the uterine contractions, and probably, also, the very uterine contractility, so that in such cases liability to post-partum hæmorrhage, for instance, would be decidedly lessened; and in abnormal labor, where the uterus itself, for operative measures, is purposely put to sleep, rapid delivery would be hardly likely to occur, unless by design, allowing the uterus, therefore, sufficient time to awaken again, as it would be sure soon to do. Should, however, hæmorrhage take place under these circumstances, it would probably have occurred without the anæsthetic—for this agent does not separate the placenta from the uterine wall, any more than it produces, as has been gravely asserted of it in more than one instance, an hydrocephalic or anencephalous foetus.

On the other hand, the obstetric advantages of anæsthesia are decided—giving

to the patient

relief from pain and

saving of her vital powers—

and to the operator

increased facilities for action from muscular relaxation,
and absence of disturbing elements,
emotional
and intellectual.

The indications for its use in obstetrics are—

general
and special.

1. It is useful for purposes of diagnosis—both in cases puerperal
and non-puerperal.

It stops spasmodic and reflex muscular action, as in the various forms of hysteria, subduing general convulsive disturbances, quieting the abdominal muscles where their movement, regular or irregular, would suggest those of a foetus in utero, flattening the surface in so-called spurious pregnancy, straightening joints supposed ankylosed or otherwise diseased, checking the extreme tenesmus of vagina or rectum, by which prolapsus uteri, cystocele or rectocele are at times simulated; and in other cases it prevents the involuntary shrinking from pain, and consequent almost involuntary muscular action, during a severe examination.

2. It relieves pain, anxiety and restlessness during
disease, as dysmenorrhœa, carcinoma, &c.;
operations, non-puerperal and puerperal;
and especially during labor—

thereby shortening it and lessening its mortality and dangers, to mother and child.

3. It is indicated in labor, not merely because

a. it relieves pain, anxiety and restlessness, and so saves the vital powers, as already said; but because

b. it dilates the os and vaginal passage—often relieving rigidity where such exists;

c. it relaxes the voluntary muscles, preternaturally excited by reflex action, preventing their interference and undue effect;

d. it excites the uterine fibres, producing greater uterine contraction and thereby preventing inertia and hæmorrhage;

e. it prevents puerperal convulsions where threatened, and where they are present it abates them;

f. it facilitates manual or instrumental assistance where such is required.

As to the relative value of the two anæsthetics for obstetric purposes:

Between ether and chloroform, putting aside all local prejudices, which both in Europe and America have been allowed altogether too much weight, there are certain differences noticed, worthy of grave consideration. That I may not be misunderstood, I shall express myself very plainly, and in view of the circumstances under

which I have experimented with each of these agents,* I trust the profession will feel inclined to look fairly at my views of the subject, even if in some respects they run counter to the generally received opinion.

I think I may state the following as rules for practice :

1. Ether alone, and never chloroform, should be used for purposes of diagnosis and in all cases of operative surgery, capital or minor, general or obstetric, except those immediately pertaining to labor.

2. Chloroform alone should be used in midwifery, to the entire exclusion of ether.

That deaths have taken place in general practice from the use of chloroform, I freely admit. It is remarkable, however, that many of these cases have been of the simplest operations, as in dentistry, and that death often occurred before the operation had commenced, the agent having been exhibited not to lessen but to prevent pain, the nervous system being in a quiescent condition.

For the ordinary purposes of surgery, therefore, it is plain that as less risk in such cases does pertain to ether, it should be used in preference to chloroform. With regard to the practice of midwifery, however, it is far different. To the present date, so far as I am aware, there does not exist on record, from the thousands of obstetric cases in which chloroform has been used, a single instance where death can be legitimately attributed to its influence. With certain allegations to the contrary I am of course familiar, but in the cases upon which these are based, the fatal result seems in every instance to have been directly dependent, not upon chloroform, but upon one or other of the following causes :—

the agent was impure, or

was administered by an incompetent attendant,
whether physician
or nurse ;

the patient, without other care or supervision, herself induced the anæsthesia,

either during the labor
or subsequently—or

there existed some previous disease or unavoidable complication, that of itself must necessarily have produced death.

Such being the fact, the objection falls. It cannot be said that if not on record, unfortunate cases, directly depending upon chloroform, must yet have occurred ; for there are too many opponents of

* My first impressions and estimate of ether were formed in Boston, from direct observation of its effects in the hands of those who first applied it to practice, and who have ever since kept its best interests in view. I refer to these sources in connection with my own private experience with the agent, now by no means inconsiderable, inasmuch as they have all led me to a single conclusion. My first impressions and estimate of chloroform, against which I had been decidedly prejudiced, were formed from daily, I might say hourly, familiarity with it during my sojourn in Edinburgh with Prof. Simpson, who, while he was the first ever to use ether in midwifery, was only led to discover the anæsthetic properties of chloroform, at deliberate and repeated risk to his own life, by experience of the disadvantages of ether for the purposes of labor.

anæsthesia, who would at once seize upon and publish them did they exist.

If such immunity in childbed be granted to chloroform, as I conceive must be done, upon what grounds can it be explained? Upon several.

Firstly: labor, though so often treated and spoken of to the contrary, is essentially a normal and strictly physiological action—the great end for which, sexually and anatomically speaking, woman was formed. The shock, therefore, to the system which she undergoes during childbed, though in the simplest cases so tremendous, is one for which, to a great extent, provision has already been made. There is at that time a greater tolerance of nervous shock, for want of a better expression, than we find in ordinary surgical cases of apparently much less proportionate severity, especially if these be in disease of long standing, or after severe accident, where the vital powers have been in consequence undermined, or an important organ has been structurally disorganized. In these cases the vitality of the patient may be considered as below par; in labor, on the contrary, it is decidedly exalted, and above par.

Upon this point, the obstetric tolerance of chloroform, other elements seem to bear, as

Secondly: the excitability of the reflex system in the female is notorious; and that this is enhanced not merely by abnormal processes, as of various uterine or ovarian disease, but even by the perfectly healthy performance of natural functions, as of menstruation, copulation and conception. This influence is very evident during the whole term of gestation, and it is undoubtedly as powerful during labor. If it were granted that the liability to fatal depression or collapse from the use of chloroform existed during parturition to so great a degree as at other times, against which, however, we have other reasoning and direct negative evidence besides, it is probable that in the very exaltation of the whole reflex system to which I refer, we have a sufficient safeguard and cure.

But still further:

Thirdly: It is now generally believed that in the female, during the period of menstruation, a large elimination of carbon from the sanguineous system takes place through the medium of the uterus, and that at these times, accordingly, the lungs are relieved of a portion of their usual work. If this be true, and there is certainly strong evidence in its favor, then it follows, normal labor taking place almost precisely at the time of the periodical menstrual molimen,* that a certain amount of adverse impression might be produced at this time upon the general system through the lungs, which could not safely be induced by the same channel at another.

* This molimen undoubtedly occurs to a certain extent, though perhaps almost imperceptibly, at its regular interval throughout gestation, rendering the patient much more liable to abort at some times than others upon slight provocation.

By the three theories I have now propounded, namely, (1) the gradual preparation of the system for the shock of parturition, (2) the existence of an unusual, and for the time tonic, stimulus to the nervous system, by which cardiac paralysis may be averted, and (3) an unusual, and for the time tonic, depuration and decarbonization of the blood through the uterine sinuses, by which the ordinary tendency to asphyxia from the use of chloroform may be prevented—do we not have a satisfactory explanation of the immunity from accident that has been observed in the exhibition of this agent during childbirth?*

I have dwelt at length upon this point in my brief summary, the immunity of chloroform during labor, because its apparent inexplicability has been to many a sufficient reason to decide them at once against its use. "We grant that a death may never yet have occurred from chloroform in childbed," has more than once been said to me by friends of high authority, "but you may possibly lose your next patient, and are therefore not justified in such hazard." I confess that early in practice I shared these fears, but since the arguments now urged have suggested themselves, such scruples have gone, and of late I have not hesitated to administer chloroform to parturient patients far gone in cardiac and pulmonary disease.

The arguments above advanced have not, I think, been hitherto as distinctly presented by any writer or teacher, though in part they may have been foreshadowed.† Do they not explain certain other intricate obstetric problems? As, for instance, the alleged improvement of phthisical women during pregnancy; the apparent relief to pulmonary disease sometimes seen, when complicated with amenorrhœa, during vicarious menstruation; and also the rapid decline in consumptive patients, occasionally occurring after parturition. I would call the attention of thoracists to these several points.

To return—

The use of chloroform in midwifery, granting, as I have claimed, its safety for this purpose, has certain positive advantages over ether; sufficient, I consider, to entitle it to decided preference.‡

1. The vapor of chloroform is much more agreeable to the patient and to the physician.

* It might be thought that the last of the theories proposed would apply with equal force to the case of purely venous hæmorrhage from any ordinary source. I conceive, however, that even were we to allow a certain amount of influence in such cases, which have not as yet in this connection been at all investigated, it is the fact of the occurrence as a regular and normal physiological phenomenon during labor, no matter how small its extent, that furnishes the key to the whole question.

† I frankly acknowledge that my attention was first riveted upon this question some thirteen years ago by my friend Dr. Walter Channing, to whose philosophical remarks upon the subject in his excellent treatise upon Etherization in Childbirth, I would refer my readers.

‡ To these I called the attention of the profession several years since, at a meeting of the Suffolk District Medical Society, at which it had been proposed that the physicians of this city should once for all stamp their emphatic and general condemnation upon the inhalation of chloroform. I then claimed that whatever objections might be urged against the drug for ordinary practice, an exception must be made in its favor for cases of midwifery, promising that at a future day I would revert to the subject. I accordingly now redeem this pledge.

2. It is less likely to occasion any unpleasant or depressing concomitant, as nausea, vomiting, &c.

3. Being more powerful than ether, it induces anæsthesia with much more rapidity—a matter of great importance in labor, where it is always necessary, except where operative interference is required, that the effect of the anæsthetic should be confined to the pains, and not pass over into the interval.

4. Its effects are much more transient than those of ether, a characteristic of equal value with the last, and for precisely the same reason, namely, that

5. It does not, as is frequently the case with ether,* prevent the recurrence of the pains, and so stop the progress of the labor.

6. It is more efficacious than ether for restraining or preventing puerperal convulsions and puerperal mania.

It has been suggested to me by a close observer, Dr. McIntire, now of Concord, N. H., whose use of chloroform in childbed has been very extensive and dates from its first suggestion to the profession, that when resorted to there is much less danger of puerperal fever, if the patient, as is often the case, has been directly exposed to contagion or any other exciting cause. From the facts communicated to me by Dr. McIntire, I am inclined to think there are good grounds for his opinion. There is no doubt, at any rate, of the efficacy of chloroform in preventing exhaustion, nervous irritation and other predisposing causes.

As to the time of its administration, a point upon which there has been much difference of opinion:

Generally, its use is hardly required till the completion of the first stage of labor, when the os uteri has become fairly dilated. Should there exist, however, sufficient suffering at an earlier period, the agent should certainly then be resorted to. It should be given only during the pains, except a complication exist requiring manual or instrumental interference, when its use should be continued through the interval; and in this lies one of the chief advantages of chloroform in midwifery, that whereas given during the pains alone, and properly, it not only does not interfere with the uterine contractions, but regulates, if inconstant, and enhances them, on the other hand, if a cessation of that action be required to enable us safely to pursue any measures within the cavity of the uterus, as for turning or applying forceps above the brim, we can obtain it by extending the use of the agent through the interval. In a large proportion of cases it will not be necessary, at any time during the labor, to induce complete insensibility; a very few breaths of the chloroform, sometimes indeed a single one, sufficing to annul the sensation of pain.

* The liability of ether in this respect is notorious. For a single admission to the point, and among many that might be adduced, I will refer to editorial articles in the *Boston Med. and Surg. Journal* for August of the present year (pp. 63 and 87), published *after* the above paper was publicly read.

The absolute amount given is usually too small and with too sparing a hand. Somewhat like opium, we get from minute doses a period of excitement and perhaps of delirium that is escaped by more decided application. The great secret is to produce the narcotism as rapidly as possible, and yet gradually obtain our mastery over the respiratory organs. This remark applies with equal force to the administration of ether in ordinary surgical practice, though its importance is too often lost sight of or not fully appreciated.

At first, and throughout, atmospheric air should be freely admitted with the vapor applied; and therefore I would condemn any form of artificial inhaler, however carefully constructed. The simplest form is the best, and a mere handkerchief or napkin will answer every indication if it be only borne in mind that the vapor of chloroform is much heavier than air, and if properly applied will descend about the face of its own weight.* Attention to this fact will also prevent the possibility of vesicating or unduly irritating the mucous or cutaneous surfaces. The patient should be told from the outset to inspire very deeply; the motion soon becomes automatic, and the vapor, by penetrating every pulmonary vesicle, produces a much more profound and instantaneous effect. Throughout the inhalation and as a matter of course, due attention should be given to the pulse, and more especially to the respiration of the patient.

I have referred to the necessity of the agent being perfectly pure and reliable. In this matter perhaps I may be overcautious; but upon personally inhaling many specimens of chloroform, procured from different sources, there has apparently been evident a diversity of effect, and I therefore still confine myself to what from long experience I have every reason to be satisfied with—the manufacture of Messrs. Duncan & Flockhart, of Edinburgh, procuring it either through friends or responsible parties in the trade.†

Of chloric ether I have had much less experience than of sulphuric ether and chloroform; knowing no reason to prefer it to either of these agents, while there are several decided objections to its use, I omit its further mention.

* A suggestion has been made to me by Dr. Sutherland, the well-known Professor of Chemistry at Montreal, that may prove of extreme value in preventing the occurrence of accident from chloroform in ordinary surgical practice. It is that the face and body of the patient during inhalation should be turned more to one side than is generally the case. The weight of the vapor being such as after a few inspirations to fill and almost hermetically seal the lungs by its mere gravity, the position I have indicated would evidently allow more perfect expiration and a much more complete entrance and admixture of atmospheric air than is otherwise possible.

† Messrs. Metcalf & Co. and Leopold Babo, of Boston, are prepared, I believe, to furnish chloroform directly from Messrs. Duncan & Flockhart.

The above rules one would suppose to be simple enough. With reference to the objection made, as in this JOURNAL for Oct. 15th, page 228, that ignorance of these plain and reliable formulæ as to the administration of chloroform, because common, is sufficient argument against learning them, it applies equally to every drug of any power used by medical men. Because accidents have happened, in the hands of the ignorant, from their exhibition in surgery, the agent is not to be blamed or lightly thrown aside: that accidents have happened from their exhibition, in the hands of the wise and skilful, who were yet on an important point or points ignorant, careless or forgetful, should no more be laid to the agent's discredit.

It is sometimes asked, if a patient should be urged to the use of an anæsthetic, when timid or prejudiced against it. This is a question that, personally, I have no hesitation in answering affirmatively. These fears, as already said, are perfectly groundless, when the agent is properly given and its use duly restricted. The risks to life in labor lie rather in the absence of an anæsthetic than in its administration, and so does the liability to a tedious recovery. Few if any patients, and this remark applies also to cases of general surgery, but can safely bear an anæsthetic, and come kindly under its influence, too, if it be properly exhibited; and every additional example of this that we may be able to present in practice, is so far a refutation of the belief to the contrary that so generally obtains. For this reason I should advise its use under the circumstances we are now considering, but not for this alone. Since entering obstetrical practice, it has been with me a matter of conscience, this abolishing the last and most exquisite agony of all, save dissolution, to which, in one respect, the rending asunder of two distinct natures during childbirth, it bears no slight resemblance.

I can recall not one single case of labor among several hundred where I have given chloroform, in which, however simple or complicated the case, I have noticed the slightest ill effect from the anæsthetic; in all, I am satisfied, its use was attended with benefit to the patient. I refer to this personal experience for the same reason that has controlled my practice—that I believe that in the advancement of medicine, individual influence but *begins* with the cases, be they few or many, under a physician's care. It is the example and the embodied thought that avail.

SPOTTED FEVER.

BY E. W. JENKS, M.D., STURGIS, MICH.

DURING the last winter and spring a new form of disease has prevailed in different parts of the country, which has by common consent received the name of "spotted fever." In this immediate vicinity I saw no cases; ten miles from here, in La Grange County, Ind., the disease prevailed to quite an extent; a number of cases proving suddenly fatal. In other portions of Northern Indiana the disease was more common and still more fatal.

My own preconceived ideas of the disease, from what I had heard, were that it was a variety of typhus. The first case I saw perplexed me exceedingly, and I was ready to call it either typhus or cerebro-spinal meningitis. From repeated observation I am convinced that it was neither one nor the other, but a distinct and peculiar disease, having its own peculiar morbid cause and phenomena.

Without giving a history of each individual case, I will give only the general characteristics of the disease, as it presented itself to

me; among the most striking of which were the suddenness of attack, and, in fatal cases, the sudden fatality. Most of the patients were attacked with a chill, following which would be the sudden occurrence of headache, mostly in the posterior region of the head, with severe spinal pain, sometimes extending to the limbs. Soreness of the flesh in all parts of the body was complained of in almost every instance, so as to elicit tokens of suffering whenever the patient was moved, even in those cases where there appeared to be almost complete stupor. In the majority of cases the head was drawn back, and no proper amount of force could bring the chin to the breast. Immediately following these symptoms, and in some cases simultaneous with them, was the characteristic eruption, which was of a dark purple color, non-elevated, and not receding upon pressure; there would also be some lighter colored spots, making a gradation of color from the dark ecchymoid spots, to those of a light red. There was no uniformity in the size of these spots; some were not larger than a pin's point, while some were one half to three fourths of an inch in diameter. In one case I saw, in addition to the spots I have described, several large elevated spots, of the size of a twenty-five cent piece, of very dark color, presenting outside of the dark color a blistered appearance. Dr. Fletcher, of Lima, Ind., informed me that in several instances he observed these elevated blistered spots.

There was sometimes vomiting in the commencement of the attack, with an abhorrence of food. I neither observed nor heard of any case of diarrhoea or abdominal tenderness; in every case there was obstinate constipation. The febrile symptoms varied; in the sudden fatal cases none followed the chill, but the pulse was feeble and the skin cold. In none of the cases was there a strong, full pulse, and the heat of the surface was less in all cases than is usually observed in acute diseases. Dr. George Fletcher, of Lima, Ind., with whom I saw some cases of this disease, and to whom I am indebted for an account of some of his observations, says that in one case which recovered, the patient lost permanently the use of one eye, there being complete amaurosis. In another case there was strabismus and curvature of the spine, which continued at last accounts, several months after. In one fatal case I saw, there was swelling of the cervical and submaxillary glands. There was not complete delirium in any case—the tendency was more to stupor than delirium; the patients could usually be aroused so as to give intelligent answers to questions; in all fatal cases the patients died comatose.

In one case only was I permitted a *post-mortem* examination. The patient, a girl aged 13, went to bed at night apparently well; getting up in the night to obtain a drink of water, she suddenly lost the use of her limbs. Her parents not hearing her return to bed, got up and found her on the floor; she said she could not walk, and

complained of cold, headache, and soreness of limbs. I saw her the next morning; she was lying with her head thrown back, the surface of the body was cold, and covered with the characteristic symptoms; the pulse was slow and feeble, the pupils were dilated, the bowels were neither distended nor tender. She was in a state of stupor, yet when aroused would complain of severe pain in the head, back and limbs. The next day there were more febrile symptoms, yet at no time as manifest as is usual in acute diseases. In this case only did I see any glandular swellings about the neck. She remained in about the same condition until the third day, and then died comatose. Autopsy was made twelve hours after death. The brain was found very much congested, the veins being distended to their utmost capacity; there was a small amount of serum effused at the base of the brain, and there appeared to be a slightly softened condition of the upper portion of the spinal cord. The left cavities of the heart were entirely empty, while those of the right side were filled with very dark-colored blood, with a small amount of coagula. The dependent portions of the lungs only were congested; otherwise they had a healthy appearance. I regret that I was not allowed time to examine the abdominal viscera.

Without giving the details of treatment in any of the cases of "spotted fever," I would merely say that the treatment most successful was upon the sustaining plan, viz., brandy, quinine, beef-tea, and tinct. ferri mur.

The mortality of spotted fever was very great; in the majority of cases they were speedily fatal; the commencement of the attack was the time to be watchful; those patients that lived several days were quite apt to recover, although recovery was very slow.

The nomenclature and pathology of this disease have been subjects of much disputation. Many medical men have denied the existence of such a disease. Some have called it by one name, and some by another. I have been unable to find in any medical work a description of the disease as it presented itself to my notice. I do not find it mentioned in any work on the Practice of Medicine. Dr. Bartlett, in his work on "Fevers in the United States," speaks of a disease which prevailed in New England between the years 1807 and 1815, which was commonly called spotted fever, and was supposed by some writers to be the true typhus. Dr. B. says: "It is very certain that in many important particulars it bore a striking resemblance to true typhus. Dr. Elisha North called it *a new petechial typhus*. Dr. Hale, of Boston, regards the disease, as it prevailed in Gardiner, Me., in 1814, as a congestive fever." "It is not easy," says Dr. B., "at the present day, upon such evidence as we possess, to decide with any confidence upon the precise character of the spotted fever of New England." Dr. Bartlett's conclusions of the spotted fever of New England, from all the information he could obtain of the disease, were such as might be proper to con-

clude of the spotted fever of this vicinity, viz., "that it belongs to that class of new and more or less temporary epidemics, each having its peculiar character, marked by its peculiar phenomena, and depending upon new and peculiar combinations of unknown morbid influences, which have always from time to time made their appearance, rather than to the class of established and permanent maladies."

While engaged in writing this article, my attention has been called to an elaborate paper upon "Spotted Fever as seen in the vicinity of Philadelphia in 1853," by Dr. W. W. Gerhard, included among the "Transactions of the College of Physicians of Philadelphia," and published in *The American Journal of the Medical Sciences* for July, 1853. I am extremely gratified that my own views and limited observations of the disease correspond so closely with such high authority. I would commend the paper to all who wish to investigate this disease, but more especially to those who have questioned its existence.

This paper of Dr. Gerhard's is the first I have ever seen in print describing "spotted fever," so as to correspond with the disease as it prevailed in this vicinity. My own views of the pathology, diagnosis and nomenclature of the disease are given in this paper, and since the publication of it I can add nothing more appropriate than is given in the language of Dr. Gerhard. He says:—"Although the proof of spotted fever being a blood disease is to my mind conclusive, it must not be ascribed to an impoverished condition of this fluid from innutritious or deficient food, as none of the patients whom I saw were in a condition of actual poverty, and a large majority belonged to a class amply supplied with all the comforts of life. The disease, indeed, is one which I should place in the list of rare peculiar disorders, evidently depending upon diseased conditions of the blood, which occasionally show themselves; they last for a time, then disappear, but are not sufficiently permanent in their attacks to find a place in the regular treatises on the practice of medicine. The diagnosis becomes easy to one who has become familiar with the disease, from the individual physiognomy of the patient. There is a peculiar dusky hue and an expression of stupor, conjoined with the eruption, which characterize the disease at once, especially if we add to these signs the cerebral symptoms of the disease.

"Inasmuch as this disease is attended by no definite anatomical lesions, the appellation given to it more than half a century ago by Dr. Gallup, and others in New England, of spotted fever, should be retained. It is sufficiently characteristic, and involves no doubtful point in question. The only objection to the term is that the disease may be confounded with epidemic typhus or ship fever, in which the whole body is also covered with spots, but these constitute a real exanthema, and are, of course, of a totally different

character and aspect from the eruption of spotted fever. The latter is little else than a hæmorrhagic effusion, very like that of scurvy.

"The most important remedies are stimulants. The necessity for stimulation is based upon the rapid loss of force which takes place in this disease. The disease I believe to be produced by some unknown cause, which we may call poison, if we choose, acting upon the body. A certain time is required for the elimination of it from the system, and during this time we must support the strength by appropriate food and stimulants."—*Buffalo Med. Jour.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

OCT. 12th.—*Puerperal Inflammation of the Articulations of the Pelvis.*—Dr. JACKSON reported the following cases:—

"On the 29th of August, a woman, æt. 25, entered the Hospital under my care. Three weeks before, she had been delivered, by turning, of a child that lived three days. The placenta presented, and there was considerable hæmorrhage before and after labor. On the fifth day she was taken sick, and for some time had marked chills and heat, with perspiration; this last continued until entrance, and more or less afterwards. There was considerable lochial discharge, with milk; and the abdomen, though somewhat tumid, was neither painful nor tender. On admission, the pulse was 112, and she was pale, but there seemed nothing alarming about her case.

"Sept. 4th, she complained of a steady pain along the outer part of the right thigh, and mostly towards the upper part; and she then for the first time stated that it commenced about a week before her entrance. This pain went on increasing, and got to be quite severe, though temporarily relieved by leeches and some other local applications. On the 8th, however, she complained more of the inside, towards the groin, which, on examination, was found to have a brawny feel, with a considerable swelling of the whole upper part of the thigh. Meanwhile the abdomen was natural to the feel.

"On the 9th, as it was thought that a deep-seated abscess might be forming in the thigh, she was transferred to the surgeon, under whose care she remained until the 16th, when she was again returned to the medical ward. Meanwhile the abdomen had become tumid; a cough, which she had had somewhat since entrance, had considerably increased; and for the last three or four days she had been having frequent, loose and very offensive dejections. The swelling of the thigh had increased, but the pain was less. On the 18th, there was tenderness, with some feeling of resistance, and a dulness on percussion towards the right iliac fossa; the next day the swelling became more defined, and it was soon evident that a large fluctuating abscess was forming rapidly in that part; the pain there was quite severe, though there was neither then, nor at any time, any evidence of a general peritonitis. On the 23d of September, a puncture was made in the most prominent

part of the tumor, and six pints of a chocolate-colored, rather thick, and very offensive fluid, were drawn off, with some pus towards the last. From this time two or three pints of a thin, offensive and purulent fluid escaped daily from the puncture when she was turned upon her side; the pain was very much relieved, but the diarrhoea continued, with more or less cough; and, though she took great quantities of food and stimulants, and bore them well, she gradually sank, and died on the 1st of October, nearly eight weeks from the time of her confinement. There was never any complaint of the pubic region.

"It should be stated that before the puncture the feeling of resistance, with dulness on percussion, extended upwards from the tumor towards the right hypochondrium, but without much more swelling than over the abdomen generally; there was also much resonance on percussion over the tumor for several days before death, which was attributed to the decomposition that was supposed to be going on within.

"On examination, the whole upper, inner and posterior half of the right thigh was the seat of a defined cavity, traversed by a network of strong bands, and of a dark-gray color upon the inner surface. Superiorly it extended to the symphysis pubis; the bones being separated to the extent of an inch by an almost complete destruction of the intervening tissue, and being themselves, externally to the articulation, denuded to a considerable extent. The abscess that was opened was situated between the abdominal muscles and the peritoneum, and communicated freely with the one in the thigh; it extended as high as the cartilages of the ribs, and it also burrowed down into the cellular tissue about the cæcum and ascending colon; but neither this nor the pubic abscess extended into the true pelvis. Considering the amount of discharge during life, the contents of the abscesses were very inconsiderable. The muscles, of course, were somewhat disorganized. There was some acute inflammation of the peritoneum in the neighborhood, but otherwise the membrane was well. The veins, also, were well, so far as examined, excepting some fibrinous clots towards the middle of the thigh. Otherwise no disease was found; the intestines not being opened, as they looked healthy externally.

"This was a case of puerperal, though not of pelvic cellulitis; and the symptoms would rather show that it commenced in the thigh, though it is impossible to conceive what could have caused it, and it is to be remembered that the pain began upon the outside of the thigh, where the abscess was not. It may have been, however, that it had its origin about the pubes; and if so, I would like to report, in connection with it, the two following cases that I examined some years ago, as I think it must be considered a very rare form of disease:—

"On the 21st of July, 1835, I examined a woman, æt. 24, who had had an easy labor on the 26th of June; this being her second confinement. The abscess about the pubes would have held about five ounces, and contained thick pus; the lower part of the recti muscles being destroyed, and also the entire ligamentous connection between the pubic bones, excepting the posterior ligament; the bones being separated to the extent of one third of an inch, and denuded, each of them, to the extent of an inch. There was also a small abscess on each side, between the bones and the origin of the adductor muscles. There was also a considerable quantity of pus in the abdominal parietes, mostly if not alto-

gether upon the right side, mostly between the rectus muscle and the peritoneum, and extending quite to the cartilages of the ribs. There was also an abscess that would have held about eight ounces, and opened near the anus ; but this seemed to have no connection with the other cavities. There had been very great pain in the symphysis pubis, and the patient said that when she moved in bed it seemed as if these bones (pointing to the symphysis pubis) 'were drawing apart.' She lay with her knees drawn up, and mostly upon her back ; sometimes towards the sides, or even towards the face, but in such a position as to prevent any separation of the pubic bones, the slightest degree of which last caused her extreme pain. The abdomen was neither full nor tense, and not particularly tender until the last week. The perineal abscess opened eight days before death, and had been known to be forming for four days before. Fulness and hardness in the epigastrium was observed the last few days. The lochia continued for five days, and was followed by a discharge of yellow matter from the vagina, which became thicker before death, and constant ; a fact which was not known at the time of the examination. The patient had a bloodless appearance, and the skin was hot and dry, but no chills were reported. There was much headache and vomiting, with diarrhoea ; the dejections sometimes being involuntary. The milk was scanty.

"The second case I examined April 11th, 1837, and the following note was made of the articulations of the pelvis :— '*Symphysis pubis ; acute inflammation.* Bones separated to the extent of one third to one half an inch ; ligaments connecting them mostly destroyed, and thick, white pus in the cavity they formed ; opposing surfaces of bones covered by a very thin layer of white cartilage, and externally joined by periosteum, the bones being nowhere denuded. Right sacro-iliac synchondrosis diseased in the same way, to about the extent of an inch or more, and towards the upper front part of the sacrum. Bones slightly separated, and allowing of distinct motion ; the motion of symphysis pubis being quite free. Between the bones there was some pus, as in the symphysis. Opposing surfaces everywhere covered with cartilage ; but the ilium, just external to the disease, was quite denuded to the extent of one inch by one third of an inch, the periosteum about this part being thickened, firm, whitish, and easily separated from the bone. Sacrum nowhere exposed. Left sacro-iliac synchondrosis quite sound.' There was also a trace of acute peritonitis, inflammation of the right common and internal iliac veins ; and 'in each of the sternoclavicular articulations was a small quantity of moderately thick, yellowish pus, but without any redness of the synovial membrane.'

"The patient was the wife of a clergyman, 21 years of age, and perfectly healthy. On the 17th of March she was confined, and her labor was natural, though she complained much of her back and required constant support. It was suggested that there may have been relaxation of the ligaments of the pelvis, which, though not unfrequently occurring as a physiological process, may in this case have induced inflammation.

"For the first ten days she went on perfectly well. Then she had a severe rigor, followed by heat and perspiration, and from that time there were very grave constitutional symptoms as long as she lived ; but the local indications of disease were very much less marked than would have been expected, though the abdomen was throughout tumid

and tympanitic. On the 1st of April she is reported as nursing her child. On the 3d, 'pressure on abdomen, from pit of stomach to pubes, gave no uneasiness, and so of every part within reach of external pressure.' On the 4th, 'no pain anywhere. Carefully examined over uterus, but not tender there.' On the 5th, she complained of 'pain at bottom of sacrum,' and on the 6th, 'of pain precisely in course of right sacro-iliac synchondrosis, with severe pain there on pressure. 'A careful examination per vaginam was made by Dr. Whittemore, of Brighton, the attending physician, but there was no tenderness in any part of pelvis or its contents.' On the 8th, she was 'worse than ever,' but there was 'no pain, no complaint.' On the 9th, 'lying on back, with knees drawn up, but can move herself without assistance.'

"A record of the symptoms was taken at the time, from notes by Dr. Channing, who saw the patient in consultation with Dr. W."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 29, 1863.

DRAINAGE OF NEW BOSTON.—Perhaps the most difficult and at the same time the most important of all the questions which social science is endeavoring to solve for the good of mankind, is that of the disposition of the sewage of large towns. Certainly none is more directly connected with the comfort and health of their inhabitants, or more worthy the attention of those interested in economic and sanitary reform. If we look upon man as the microcosm, and seek in his perfect mechanism a pattern we may imitate, we shall not be disappointed. We shall find that there are provided channels for the admission of the three great essential elements of life, namely: air, food and water, but we shall also find in connection with them other channels of equal size and of the same relative importance, destined for the outward transmission of effete and noxious gases, solids and liquids. How important nature holds the functions of these sewers of hers to be; may be judged by the effect produced upon the whole economy by the obstruction for a short time only of one of them, and from the fact that in their disarrangement lies the cause of a great part of human disease. If, on the other hand, we look out into the great world, we shall see that just in proportion as man is civilized so far does he imitate these same sanitary laws in his body corporate, giving to the efferent systems of his dwelling places the same attention as to the afferent. The savage, seeking only to supply his immediate cravings, cares naught for the effect of the offal which collects in and about his hut. A free life in the open air neutralizes his sanitary shortcomings. The inhabitant of the eastern palace invents surface drainage in the strict meaning of the term, and makes his narrow streets the receptacle of putrid filth. Here the dog and the buzzard help to correct the error he commits, but the frequency of deadly epidemics shows how poorly they perform the duties of scavengers. In Rome, however, there are standing to this day, the noblest of all her monuments of past

glory and civilization, the massive remains of the grand aqueduct, which brought unfailing supplies of pure water across the poisonous marshes, and the cloaca maxima, through which one of her old Emperors passed in a boat as easily as the hero of "Les Miserables" traverses the sewers of Paris on foot. How many cities in these boastful times possess works like these which 2000 years will fail to destroy? Do we not rather imitate the less civilized barbarian in providing by scientific commissions and at immense cost for the gratification of our desire for what is good to drink, and leave undone or to some temporizing official the management of the equally important excretory apparatus of our city? No subject has been so entirely disregarded hitherto by the proper guardians of the public health among us as this. We have long recognized in malaria and the emanations from foul drains and putrid organic matter the source of many virulent diseases, and have found in flooded cellars and damp soil the cause of numerous fatal affections, but have we sufficiently instructed the public in these important facts or suggested the proper remedies for such evils?

How many of us are aware that a matter of no less importance than the system of drainage for the whole Back Bay territory is now before the City Government; a territory which is to form the place of residence for so large a proportion of the inhabitants of Boston? It is a matter of great importance in a sanitary point of view, for the question arises, whether we are to have one definite and proper plan and grade to which all parties shall adhere, or whether speculators shall be allowed, as heretofore, to build houses below the tide level or at any level they please. It was the original plan, according to the tripartite agreement between the State, the City and Water Power Company, to drain the whole of this territory through one large sewer of nine feet in diameter into Charles river; but it subsequently became evident that as long as the railroads, which traverse it, retain their tracks at the present level, such a system would be impossible. A commission was accordingly appointed by the City Government to confer with all parties interested, and to report some other plan acceptable to all concerned. This report has, after much labor, been recently concluded, and will, we hope, prove entirely satisfactory to all parties. It is proposed that the large sewer already partially laid in Berkley Street shall be taken up, and that all the land lying west of the railroad tracks shall be drained into Charles river, while the sewage of that portion situated east of the same shall flow into the South Bay. If, as is premised, sewage is inoffensive and harmless, so long as it is mixed with or covered by a large body of salt water, there can be no objection to this plan, which provides for its escape through several outfalls so as to effect as speedy a dilution as possible, and will not interfere with any future arrangements for its economic employment as manure for the neighboring agricultural districts.

The conclusions of the commissioners with regard to the grade of this territory are highly commendable, and will, we trust, be strictly acted upon.

"The first requisite for a good system of drainage for the Back Bay territory is, that it should be filled up to a sufficiently high grade. The streets, at their intersections, on the part recently filled up, are generally at 18, the floors of the cellars and basements being three to six feet lower.

"Ordinary high water is at 10; but it is not uncommon for spring tides, aided

by strong easterly winds, to rise to 14. The great storm of 1851, which carried away Minot's Ledge Light-House, caused the tide to rise to sixteen feet in the harbor. This is a height from one to four feet above the basement floors of the houses recently built on the Back Bay territory. In other parts of the city which have been reclaimed from the sea, the streets and buildings are generally at a considerably lower grade; and in order to prevent the frequent flooding of cellars and low basements, gates or flaps are placed at the outfalls of the sewers, to stop the influx of the tide. When, however, a great rain or thaw occurs at the time of an extraordinary high tide, the cellars and low basements are liable to be flooded, by the overflow of the sewers, if not protected by hollow plugs. On such an occasion there can be no discharge at the outfalls until the water in the sewers has reached a higher level than the tide; for the reason that the outflow is retarded, by meeting sea-water one thirty-eighth heavier than fresh, added to the necessary friction in passing through circuitous sewers, and the difference in level required to give the sewage sufficient impetus to overcome the obstacles to its free passage, and sufficient velocity to conduct away all the surplus water from the territory. * * * * *

"The Commission do not suggest any change in the grades above referred to, but recommend that the same be extended to the whole territory, and that no streets be permitted on any part of the Back Bay of lower grade than 18."

The following observations respecting the trapping of drains should be presented to every household in their proper light, nor should they be forgotten by the physician in his investigations into the causes of local disease.

"The Commission recommend that it be made imperative that all drains be trapped on a regular and uniform plan, in the shape of a cesspool; a diagram or model of which should be deposited in the City Hall. Before an entrance is authorized to be made into any sewer, the above condition should be strictly complied with. It is a common practice in this city to have the rain-water conductors untrapped. Many of our best builders do not countenance this course, but it is too frequently done. The consequence of having the upper orifices of such conductors open into the air during the flood tides, probably nine hours out of the twenty-four, or during the time the valves are closed at the outfall, cannot be too well understood by the community. When the tide closes the valves at the outfalls, the sewer begins to fill up, and if there are any openings into the atmosphere, just so much foul air will be thrown out through them as is displaced by the water entering the sewer. This offensive gas thus issuing from the conductors will steadily deteriorate the atmosphere. When these orifices are arranged in the ordinary way upon the houses, say four inches in diameter, and twenty-five feet apart, there will be several thousand openings emitting an immense quantity of air, which diffuses itself throughout the district. If this noxious air could be colored, so as to be made visible, its impurifying influence would not be tolerated a single day, provided a remedy could be found. * * * * *

"In new districts to be occupied by dwellings, a larger expenditure than ordinary would be warranted, if complete immunity from the effluvia of sewers could be secured thereby. Two things are requisite to insure success: 1st, the common sewer must be made substantially air-tight, with all the street entrances securely packed or trapped; and, 2d, the trappings of every private drain must be of sufficient depth to resist the greatest pressure that the foul air can attain in the common sewer, and of course the part of the house drain, between the trap and the common sewer, must be substantially air-tight, and all openings into it be protected."

The Commissioners are of the opinion that the present system of cesspools, in connection with the large amount of water constantly discharged into them by domestic use, renders any arrangement for flushing the sewers entirely unnecessary; and when we consider the 17,000,000 gallons of water daily used in the city and the large amount of rain water which falls, we can readily understand that they are

always scoured and clean, and that a few inches only of matter is deposited within them in ten years.

At a meeting of the Trustees of the Massachusetts General Hospital, held on Wednesday, Oct. 21st, 1863, the following resolution in reference to the death of Dr. George Hayward, prepared by a committee appointed at a previous meeting, was adopted:—

Resolved, In view of the recent death of Dr. George Hayward, which occurred suddenly on the 7th instant, at the advanced age of 72—the Trustees of the Mass. Gen. Hospital would express their sympathetic interest in this sad event, and their regret for the departure of one so long and intimately connected with this Institution. Dr. Hayward was first chosen Assistant Surgeon in 1826, then Junior Surgeon in 1830, and chief in 1838, which post he resigned in 1851, after *twenty-five* years of active service; still, however, continuing, to the day of his death, as an efficient member of its Board of Consultation.

The history and records of the Hospital bear enduring testimony to his faithful and devoted labors in all these relations, and of the high appreciation in which they were held by our predecessors in office; and now that his life of varied usefulness on earth is closed, the present Board of Trustees desire to offer this last and grateful tribute of respect to his memory.

Voted, That a copy of these resolutions be communicated to the family of Dr. Hayward.

At the same meeting, Dr. Solomon D. Townsend was appointed Dr. Hayward's successor on the Board of Consulting Surgeons.

RAILWAY HOSPITAL CAR.—By the invitation of E. B. Phillips, Esq., Superintendent of the Boston and Worcester Railroad, and the Executive Committee of the Sanitary Commission of this city, at the Boston and Worcester Railroad station, an opportunity was afforded to the profession to inspect a hospital car designed for the transportation of soldiers between New York and Boston. Each car contains nine litter beds and twelve folding, reclining hospital chairs in addition to ordinary car seats; also a closet provided with medicines, lint, bandages, tourniquets, plasters, sponges, &c., a closet for stimulants and culinary stores, such as extract of coffee, condensed milk, beef-stock; culinary apparatus capable of providing food for fifty invalid soldiers, and a constant supply of hot water, and will be in charge of a military hospital steward and nurse. Each litter bed is an ordinary hospital litter with legs, suspended by elastic bands attached to stanchions and provided with arm rest. They can all be removed in a few moments, and so packed as to occupy the space of but one litter, and their places supplied by the folding easy chair, each with a pillow attached. The car is furnished with air- and water-pillows, hospital clothing, &c.—everything in its appropriate place. A bell at each end of the car is used to call the attention of the attendants. Sick and wounded soldiers can now be conveyed on the same litter from the battle field to this city without removal in transportation.

LECTURES AT MASS. MED. COLLEGE.—The annual course of winter lectures in the Medical Department of Harvard University will be opened on Wednesday, Nov. 4th, by an introductory lecture by Prof. Shattuck, at the Medical College.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 24th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	46	38	84
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.5	32.7	68.2
Average corrected to increased population	00	00	74.74
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
16	5	1	2	0	0	2	6

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 24th, 84. Males, 46—Females, 38.—Accident, 2—abscess of bowels, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 3—cancer (of the uterus), 1—cholera infantum, 6—consumption, 16—convulsions, 1—croup, 5—diarrhœa, 2—diphtheria, 4—dropsy of the brain, 3—drowned, 1—epilepsy, 1—scarlet fever, 1—typhoid fever, 2—gastroitis, 1—disease of the heart, 3—disease of the hip, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 2—marasmus, 5—old age, 1—paralysis, 1—peritonitis, 1—phlebitis, 1—pleurisy, 1—premature birth, 2—puerperal disease, 1—rheumatism, 1—thrush, 1—unknown, 3—wound (gunshot), 1.

Under 5 years of age, 42—between 5 and 20 years, 5—between 20 and 40 years, 13—between 40 and 60 years, 17—above 60 years, 7. Born in the United States, 58—Ireland, 14—other places, 7.

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ALCOHOLISMUS.

[Read before the Boston Society of Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

BY GEORGE C. SHATTUCK, M.D.

THE word Alcoholismus having been introduced into nosology, and there being a question as to what cases it is applicable, it is proposed at this time to analyze the histories of three patients whose symptoms were mainly referable to the poison known as alcohol.

A large, fat man, 47 years of age, came under treatment (in the Massachusetts General Hospital) in the month of December. His friends described him as a high liver, and said that for the last twelve or fifteen years he had indulged freely in vinous and alcoholic drinks. He had spent twelve years in the East Indies; had good uniform health there, and during three subsequent years, spent in this city, when he took but little exercise, indulged freely in eating, drinking and smoking, but still called himself a well man, and was not regarded as an invalid by his friends, till within the last five months, when weakness and loss of appetite were prominent symptoms. Five days before coming to the Hospital, he noticed his legs and belly as swollen, and on that account consulted a physician for the first time, and went to the apothecary to get the prescription. He was so helpless, nervous and querulous that his friends sent him to the Hospital. He was found with a light complexion, a countenance pale and troubled, so weak that he needed assistance to get out of bed, general anasarca, marked ascites, dulness and deficient respiration over lower backs, but with no cardiac symptoms, except a feeble impulse; the pulse regular, though weak, anorexia, the tongue moist and flabby, with a white coat. The urine scanty, high colored; bile and albumen were found in it, but no casts. Diuretics and stimuli were administered as he could take them, but his unfavorable symptoms continued. He lost strength rapidly, was dull, indisposed to exertion, and did not complain of pain. The abdomen was so distended as not to admit of a satisfactory exploration of the hepatic region. The bowels were kept open, the discharges

loose, not remarkable in color, and involuntary during the last two days. Somnolence and increasing weakness were then the prominent symptoms. His respiration was somewhat embarrassed, and he died, unexpectedly, thirteen days after coming to the Hospital, and eighteen days after first seeking medical advice.

At the autopsy, by Dr. Ellis, the lungs were noted as healthy, the lining membrane of the heart stained by contents. Just within the edge of the annulus ovalis was a direct opening, one fourth of an inch in diameter. The substance of the heart soft and of a pale lemon color. On microscopic examination, the striæ were generally invisible, and when seen, were very faint. The fibres contained much granular matter. Peritoneum contained eighteen pints of serum. Liver weighed more than eight pounds; everywhere streaked with granulations of a bright yellow color, and varying in size from one to three lines. Tissue quite dense, resisting the knife more than usual. Microscope showed it to be very fatty. Spleen large; weight, fourteen and a half ounces. Kidneys both quite large; weight of right, thirteen ounces, that of left, eleven ounces and a half; cortical substance thick and of loose texture. Microscope showed the tubuli to be composed in great measure of granular matter and minute globules. Mucous membrane of stomach somewhat grey. Other organs normal.

This man had undoubtedly overtaken his kidneys and liver by taking too much food; still the hydro-carbonaceous material had been converted into fat and stored away. We must believe alcohol to have been the main agent in causing his disease. We find fatty degeneration of the heart, and death resulted immediately from the failure of this organ to discharge its duties. We may note that a feeble impulse and pulse were the only cardiac symptoms. There was no murmur, notwithstanding the communication between the two hearts. The size of the heart was not modified. To what shall we attribute the somnolence; to uræmia or cholesteræmia? There was grave structural disease of both liver and kidneys; neither of these organs could have properly discharged its duties of excretion, nor could the liver have performed its part in assimilation. No disease of the stomach, and anorexia such a prominent symptom, and that organ a recipient of so much alcohol! We must note, also, the patient's not complaining of pain, and not being aware of being a sick man till within three weeks of his death, whilst the diseased processes must have been going on for years.

Another case is that of a widow, a laundress, 46 years of age, who had borne seven living and two dead children, but had not had much sickness, and considered herself well, till within five months of entering the hospital, when she noticed anasarca, and, soon after, ascites. She admitted that appetite and strength had been failing for two years or more, and that she had been addicted to the free use of alcoholic stimuli for many years. She was in bed when

first seen, which she kept, getting up only to have it made. She was decidedly fat, her countenance pale and puffy; decubitus on left side preferred; the tongue but little coated, moist; the appetite very small; digestion difficult; the abdomen much distended, fluctuating; the pulse 90, regular, its stroke and that of the heart feeble. Nothing remarkable on exploration of chest. She had been imbibing spirituous drinks freely just before entrance. The urine was of a brown color, acid; specific gravity, 1.012. No abnormal ingredients discovered on chemical examination; a few tube casts and epithelium under the microscope.

The bowels were kept quite free by laxative medicine; she took the tincture of the muriate of iron, gallic acid and tannic acid in succession, as she was able to bear them; but the stomach was easily disturbed, and she had occasional attacks of bilious vomiting. She had pain in the lumbar region, and, two or three times, of great severity. The appetite and capacity for food small; a little bread or gruel or broth constituted her nourishment. The abdomen became so much distended, and she was so uncomfortable, that she was tapped after being in the Hospital five weeks, and a pailful of yellow, viscid fluid removed. A soft, movable tumor, of about the size of a hen's egg, was found just below the angle of the right ribs on exploration, which may have been the gall-bladder, the liver being felt in the epigastric and left hypochondriac region. She was more comfortable, slept better, and took more food; the relish and digestion much improved. At the end of four days she was again running down; weakness, loss of appetite, somnolence, were the principal symptoms. She died one week after being tapped, and six weeks after entering the Hospital, very easily, and when for twelve hours the respiration and circulation were gradually failing. No autopsy was allowed.

Now what shall we say this woman died of? Is there much, is there any doubt of fatty degeneration, extending to the heart, liver and kidneys? If, with Dr. Austin Flint, Jr., we regard cholesterine as the excretory product of the liver, did she die from cholesteræmia? Was there not also uræmia? No albumen was discovered in the urine, but neither the chemical nor the microscopical examination was repeated often enough to make one sure of the condition of the kidneys. Two or three examinations were made, and no albumen discovered. The three organs, the heart, the liver and the kidneys being the seat of decided structural lesions, we cannot be surprised that dropsy was a prominent symptom. The dropsy did not kill her, although it contributed to a fatal result. If we say that she died of chronic alcoholismus, do we not designate the principal point in etiology, and is not this one of those cases where it is best to give the name of the disease from the cause?

A pale, thin man, 29 years of age, a waiter in a hotel, was under observation in January last for fifteen days. He had had diminish-

ed appetite, difficult digestion and occasional vomiting for several years, during which time he had taken alcoholic drinks frequently, at short intervals during the day, and had smoked freely. He had never had delirium tremens, never got drunk. He had done no work for ten weeks, and kept his bed for ten days. He had no headache, but was weak; pains and soreness of trunk and limbs, and occasionally sharp pain in epigastric region. Has vomited a sour liquid frequently for two days; anorexia; palpitation; dyspnoea; constipation; occasional fluttering in cardiac region. Pulse 90, quick, small and regular. Nothing remarkable on exploration of thorax and abdomen. Urates in large amount at entrance, but the renal secretion not otherwise remarkable. Bowels kept free by medicine; dejections not remarkable.

Under a regulated diet and the administration of laxatives and tonics, the nausea, vomiting, constipation and anorexia disappeared; he gained strength, but still had occasional pain and indigestion, and was weak when he left the Hospital.

We might call this man's disease dyspepsia, but the free use of alcohol and tobacco were the only causes to which his symptoms could be attributed. The alcohol, apparently, was not determined to the brain. Were not the liver and kidneys suffering? Had fatty degeneration commenced in the heart? Should we call this a case of alcoholismus, perhaps of nicotismus?

We still have much to learn of the effect of these poisons on the economy. We had no evidence in this case of structural changes in the liver and kidneys, but both were imperfectly performing their functions; and although we had no satisfactory evidence of the failure of the liver to excrete, we should accuse it of not performing its office in assimilation.

These cases, which have thus been analyzed from histories with many details, are not very satisfactory as to diagnosis, prognosis or treatment, but questions are raised by them which are frequently presented, and to which we have not as yet satisfactory answers.

The recent researches of Ludger, Lallemand, Maurice Perrin and J. L. P. Duroy have thrown much light on the effect of alcohol on the economy. Liebig's idea of its being decomposed and its hydrogen set free, seems no longer tenable. The alcohol itself is in the blood, comes into contact with nervous tissue and with secretory and excretory cells, and subserves nutrition only as it stimulates nervous action. How it favors fatty formation and degeneration we do not as yet know, but we cannot deny the fact. The most recent researches confirm long established ideas of mischief done to the liver, alcohol itself being found in the gland. Its presence in the urine is established, and disease of the kidneys in those addicted to alcoholic drinks, whose kidneys are called upon largely for eliminative action, is to be expected. We need more careful study of symptoms and lesions in those addicted to alcoholic drinks, where

the poison is not especially determined to the nervous centres. Drunkenness and delirium tremens are comparative well known. And is not a good deal to be learned from the free use of alcohol as a therapeutic agent in phthisis? Unfortunately, we have ample opportunities of studying this subject, and all interested in the practice of medicine must welcome all anatomical and physiological results which throw light on affections often complicated and obscure.

CASES COMMUNICATED TO THE BOSTON SOCIETY FOR MEDICAL
IMPROVEMENT AND TO THE BOSTON MEDICAL
AND SURGICAL JOURNAL.

BY THOMAS H. GAGE, M.D., OF WORCESTER.

CASE I.—*Inter-ventricular Opening in a Man of robust Health; Aneurism at the Origin of the Aorta, projecting and finally bursting into the Cavity of the right Ventricle.*—Dec. 26th, 1860, I was requested by Dr. Ames, of Holden, to examine the patient, and the following quotation is from my record of the case:—

Mr. H., now 19 years of age, has been perfectly healthy all his life, until within four weeks past, saving that in childhood he had measles, whooping cough and scarlet fever, all very mildly, and followed by convalescence every way favorable. He was an active, strong and very playful child, and capable of great endurance. He never had any lividity of surface. As he grew up, although wild and wayward, he was a willing and hard worker upon the farm. Some six months since he went to California, where, meeting with poor success, and having spent all his money, he determined not to remain. Unable to pay for a passage home further than the isthmus, he there enlisted in the navy of the United States, and took passage in a war vessel bound for New York. Having arrived just below that harbor, the ship lying within an eighth of a mile of shore, he availed himself of an opportunity at night when it was his watch, and having bound a life-preserver around him, jumped overboard and swam ashore, thence making the best of his way home on foot, a distance of quite two hundred miles. He reports that he was entirely well during his absence, and that he experienced no inconvenience from the effort or excitement of his escape from the ship.

About four weeks previous, while stooping, and lifting at a heavy stone, he was seized suddenly with a sharp, severe pain across the lower part of the chest, extending around to back. This was in the forenoon. The pain continued through that day, and he had a little cough, with slight expectoration of blood, which, however, subsided before next morning. From this time he began to be troubled with shortness of breath upon any unusual exertion, such as running, walking in the face of a high wind, up hill, or the like,

and gave up all work. His appetite somewhat failed him, but sleep continued quiet, and he could lie comfortably in the horizontal posture at night. He had a slight dull pain under short ribs of left side. Upon laying my hand over the cardiac region a very strong purring thrill was imparted to it, which seemed most intense immediately over the region of the aortic valves, and diminished in intensity in receding from that point in every direction, though remaining very distinct over almost the whole front of chest.

There was dulness upon percussion over the præcordial region, in a space at least four inches square; and there was decidedly increased impulse. There was a systolic and diastolic bellows-murmur, which seemed very superficial (i. e., near the ear), and which increased as the ear approached the aortic orifice, but was very loud at the apex, and also along the course of the aorta and the great vessels given off from the arch. This murmur was so loud that it was distinctly audible upon bringing the ear within an inch or two of the walls of the chest. There was a strong pulsation of the subclavians above each clavicle. The pulse was about 80, small and thrilling, and seemed unequal in the two radials, occasionally intermitting a beat, or giving one of very diminished volume. Respiration, while at rest, normal.

For three or four weeks the case went on without apparent change. On Friday evening, Jan. 20th, he went as spectator to a "dance," and remained until 12 o'clock, indulging somewhat freely in liquor. After his return home he could not sleep, and had urgent dyspnoea, which prevented him from lying down. He had also severe and continued vomiting, at first of undigested food, afterwards of green, viscid fluid, and at last of dark, "coffee-grounds" looking liquid. Saturday morning the dyspnoea increased in severity, attended by frightful paroxysms of suffocation, in which the extremities became cold and covered with clammy sweat, and the lips, tongue, and cheeks deeply purple. Saturday afternoon violent pain in the bowels came on, and he continued through that night and the day following in extreme agony.

I saw him Sunday evening, in consultation with Dr. Ames. He was in bed, with head and shoulders elevated. Although not sleeping, he was quiet and dozy, being free from pain and under the influence of large opiates. His respirations were 56 in a minute, short, imperfect and groaning. His pulse was very irregular and small—as nearly as could be counted, 130. His lips and cheeks were purple, and his extremities cold.

Of auscultation of the heart at this time I can give no satisfactory account, the sounds having become so mixed and confused as to resemble in my ear only the wild rushing of wind in a storm.

He died very suddenly in the night.

The autopsy was made thirty hours after death. The right pleural cavity contained between two and three pints of thin, straw-

colored serum, and there was a somewhat smaller quantity in left. In the pericardium there was also a small effusion, and in the peritoneal cavity two or three pints. The heart was more than double its usual size; the walls of the right ventricle being relatively more hypertrophied than the left. There was a small spot (as large as the thumb-nail) of recent lymph upon anterior surface of right ventricle, and traces of lymph along the course of the anterior coronary vein. The interventricular opening had, in the recent specimen, more the form of a half circle than now appears, and would easily pass the middle finger. The crescentic edge was thick and rounded, towards the septum between the ventricles. The valves of the pulmonary artery were nearly or quite normal—contrary to what is usually observed in these cases. The aneurism was empty and flaccid, and its walls extremely delicate and thin. It would just admit, and fitted like the finger of a glove, the terminal phalanx of my forefinger and about one fourth of the next. Its origin was from one of the pouches just at the aortal valves.

This man lived just two months after the pain first felt from lifting the stone, and just four weeks after my first examination; and it was my opinion that the aneurism commenced at the time he lifted the stone. The rupture of this pouch, which was very distinct in the recent specimen, was caused, I have no doubt, by the violent vomiting of Friday night and Saturday morning, and gave rise to the extreme agony of his last few days of life.

CASE II.—*Stricture of Œsophagus; Adhesion to Trachea; Ulceration and Perforation.*—Sept. 22d, 1860, I was consulted by Mrs. W., aged 42, a short, spare woman, of dark and somewhat sallow complexion. She was married, but had no children, and for some months had been growing irregular in her menstrual habits. She informed me that her disease was stricture of the œsophagus, that she had suffered from it for twenty-four years, and that it was owing to an injury, as she supposed, caused by swallowing a chicken bone.

For the first two or three years in which it troubled her, her health became so much impaired that her life was despaired of. She could only take liquid food, and that in very small quantities, and was constantly annoyed by lodgment of food above the stricture. Twenty years before I saw her, she had visited Boston, and placed herself under the care of Drs. Warren and Hayward, at the Hospital. Ivory-headed bougies were passed, and at her dismissal she was provided with a pair, of different sizes, and directed to use them from time to time as subsequent occasion might require. Under this treatment great improvement took place, and until within the last four weeks the stricture had given her very little inconvenience for many years.

Some time during August she had found the obstruction to food increasing, and that swallowing or passing the bougies was attended with soreness and pain. These symptoms had rapidly increased in

severity up to the time when I saw her. There was then, as passing the ball probang (about three eighths of an inch in diameter) proved, a stricture, about three inches below the fauces, through which the instrument passed with difficulty, as if over a rough, broken, cartilaginous surface, of at least two inches in extent. Its passage was attended with a good deal of pain. There was then no difficulty of breathing.

In just four weeks, I saw Mrs. W. again. The difficulty of swallowing, the pain and the soreness of the passage had all very much increased, and in addition she had most distressing dyspnœa. She had paroxysms of breathing resembling the spasmodic croup of infants, though not affecting her voice; and during these paroxysms her respiration was excessively labored and painful. She could take but little food, and that cost her great effort and distress. Soon after this the dyspnœa became continuous, with occasional exacerbations of agonizing severity; swallowing of food became almost entirely impossible, and nourishment by injection the only practicable method. There had been some cough from the first accession of dyspnœa, but there was no expectoration until a few days before death. Then there was at first small, scanty sputa of pus, but at last occasional gushes of purulent matter, of considerable quantity at a time. Mrs. W. died Nov. 7, 1860.

The specimen shows the ulceration to be even more extensive than it was supposed to be during life.

CASE III.—*Large Simple Cyst in Mammary Gland.*—Jan. 29th, 1863, I was called to see Mrs. L., aged 62, a lady of fine personal appearance and excellent general health, but somewhat inclined to corpulency. Some three years previous, she first discovered a small, painless tumor in right breast, which grew slowly, giving rise to no inconvenience, until at the end of two years it had become “as large as a goose egg.” From this time she began to give it considerable attention, and made “a great many applications” to it, and it increased with corresponding rapidity. For a few weeks prior to my examination the growth had been very rapid, and discoloration of its summit had taken place.

I found a large, globular, fluctuating tumor, occupying the whole of the right breast; the skin upon its summit thin, tense, shining, and of greenish color; the nipple pushed away to the outer side, and the whole mass perfectly free and unattached. It had become exceedingly troublesome by its bulk and weight. I removed it on the next day; the wound healed promptly, and the patient has been perfectly well since.

The whole mass removed weighed, in the fresh state, three and a quarter pounds; the contained fluid was over one and one half pints, and consisted of thin, bloody liquid, intermingled with shreds and flakes of dirty, soft coagula. There was but *one* cyst. There was, especially at the base and dependent portions, some masses

which looked like adherent, firm coagula, and there were also some looser, tuft-like masses, from which floated loose shreds of tissue into the fluid. Otherwise the inner surface was smooth and shining.

I infer that the rapid growth towards the last, and the discoloration, were caused by hæmorrhage within the cyst.

ON THE TREATMENT OF WHOOPING COUGH BY BELLADONNA
AND SULPHATE OF ZINC.

By E. GARRAWAY, Esq., M.R.C.S.E.

UNTIL a comparatively recent period the treatment of whooping cough may justly have been regarded as one of the *opprobria medici*. The authorities of the profession not even yet being agreed upon its true pathology, it is no marvel that the treatment has been more or less empirical; that notwithstanding there have been countless "infallible specifics," yet the ordinary duration of whooping cough, except when the epidemic prevails in a mild form, is still three, and even during the winter as much as six, months.

I am not about to enter into the question of the specific nature of the disorder, whether its seat be in the mucous or muscular lining of the air-passages, in the brain, the spinal cord, the stomach, the pneumogastric nerve, or elsewhere. The preponderance of opinion in the present day is largely in favor of its being a nervous disorder; and at least it would appear to have quite as much claim to be so considered as asthma, ague, chorea, epilepsy, or other convulsive disorders which it has been found impossible to localize. In mild, uncomplicated cases of whooping cough, not even functional derangement of any organ can be detected. In the intervals of the attacks of cough and concomitant spasm, a state of perfect health subsists.

The observations I have to offer are solely confined to "treatment," and one form of treatment—viz., that by belladonna and sulphate of zinc. A very extensive prevalence of whooping cough during the past winter has afforded considerable opportunities of testing the value of these remedies; indeed, I have treated every one of my cases—numbering between fifty and sixty, and these limited to private practice—with zinc and belladonna, to the exclusion of all other remedies. Of course the supervention of anything like bronchitis or pulmonary congestion has required the administration of emetics; but these cases have been rare, and in only two have I had occasion to suspend the belladonna treatment for two or three days, and substitute for it ipecacuanha, antimony and external counter-irritants. In the comparatively small number of fifty cases, it is not surprising that I have no death to record. The mortality, however, has been exceedingly large—in London amounting to from 80 to 100 a week during several months—once

even rising to 124. In my own district, the registrar informs me that, in a population of 9000, he recorded from October to April fourteen deaths as due to whooping cough.

The first three cases I saw occurred in a school. They were boys between the ages of six and nine. The paroxysms in all were moderately frequent and severe; the general health was good. Two were placed under my care; the third was left to take his chance. In eighteen days my patients had entirely ceased to cough, whilst the other boy was in precisely the same state as when I first saw him, and so continued for several weeks afterwards.

A little girl between two and three years old was brought to me, whose fits were described as of the most violent character; and indeed the poor child's appearance did not belie the mother's statement, for both conjunctivæ were so entirely ecchymosed that the white sclerotic coat was invisible; no blow, however severe, could have produced a more complete pair of black eyes. For a fortnight there was not the slightest improvement, and I was in consequence much troubled to keep the patient up to her medicine; in one week more, however, the cough was gone, and the ecchymosis had completely disappeared.

Three weeks afterwards the mother came for the same medicine for her infant, eight months old, who coughed and whooped, she told me, a dozen or twenty times in the day and some half dozen times in the night—not a severe case. I exhorted her not to be disheartened for three weeks, but to come regularly for her supplies. She never made her appearance again; and on meeting her some time afterwards, and expressing my regret that the treatment had not been followed up, she replied—"Why, the medicine you gave me lasted a week, and by that time the cough had entirely ceased, and has never returned."

These are samples (which might be multiplied) of the more favorable class of cases. Others were marked by a steady improvement, commencing at once and continuing day by day; but at the same time I must admit that not a few required fully three weeks to make a decided impression. After this period, however, the improvement was most rapid; indeed, treatment was seldom continued beyond the third week. The most lengthened period for which, in any case, belladonna was administered was five weeks. I found that if by this time the cough was not quite gone, it was nevertheless desirable to discontinue the remedy; as it would seem that after the system was thoroughly saturated, a further persistence deranged the general health without any commensurate advantage accruing; the tongue became coated, the appetite failed, and vomiting without cough would occasionally occur. On ceasing, however, to take the medicine, not only did all these untoward symptoms subside, but the remains of the cough vanished with them.

Marsh miasmata appear to render whooping cough, as they do

most other forms of disease, more intractable; and two children I could do nothing with until removed from the swamp in which they resided.

The mode of administering the belladonna was in the form of extract, either diffused in water with the sulphate of zinc and sufficient syrup to make it agreeable to young children, or, to those who were old enough and preferred it, in the form of pills—the dose being from one sixth to one fourth of a grain of the extract, and one half to a grain of the zinc, three or four times a day, steadily increasing the amount till, at the end of three weeks, children of five or six years old would be taking from four to six grains of belladonna, and twice that quantity of sulphate of zinc, daily.

So far as my investigation went, it would appear that both the tolerance of the remedy and the speedy subsidence of the disorder were in inverse proportion to the age of the subject—a child of eight or ten weeks old bearing a much larger proportionate dose than one of eight or ten years, and manifesting a much more rapid improvement. In this I find I am in accord with other observers.

Dilatation of the pupils and indistinctness of vision commonly came on after a few days. When these effects manifested themselves the dose was diminished somewhat; but having been assured by Dr. Fuller, of St. George's Hospital, whose experience of the physiological effects of belladonna has been considerable, that no permanent injury ever resulted from this condition, I did not think it necessary to interfere with the general line of treatment.

In two cases more decided poisonous symptoms were developed. One was a little girl of six, who had reached the amount of six grains daily, and whose pupils had been dilated more or less for a week. This child became one day, as her parents termed it, "silly," delivered wrong messages, gave inapt answers, asked what had become of her sisters when they were present, and talked in an incoherent and ridiculous manner. This state quite passed off the next day by discontinuing the medicines.

The other case was that of a very delicate little girl of four years, who had attained to four grains a day. I was called to her in the night under the great alarm of her parents. She had been in a state of immoderate mirthfulness and excitement during the evening, and on being put to bed could not be quiet, and at length became delirious, singing, calling for her mamma and nurse, of whose presence she was unconscious, picking at the bed-clothes, seeing imaginary objects—in fine, presenting a train of symptoms very analogous to what we witness in delirium tremens in the adult. This state was succeeded by three or four hours of refreshing sleep, such as the child had not experienced for many nights. On awaking, she was perfectly restored, and from that hour the improvement was remarkably rapid. I need hardly say I suspended the remedy for a day, and gave it afterwards in diminished doses.

Such, in brief, has been my experience of the treatment of whooping cough by belladonna and sulphate of zinc. Which of these two had the greater share in the favorable results I am unable to say, since they were not in any case disassociated; but as similar results have followed the exhibition of belladonna alone in other hands, it is reasonable to conclude that this was the more active agent. It ought perhaps, in fairness, to be recorded that some cases which were cured at the beginning of the winter showed a tendency to a return of the disorder when the cold north-east winds of March set in. Few of these came under treatment, as the relapse was not of a severe character; when, however, belladonna was given, its effects were marked and immediate.

From the limited data afforded by fifty cases of whooping cough, it would be presumptuous in me to speak authoritatively as to the propriety of this or any other mode of treatment; nor should I have obtruded these observations were I not impressed with the conviction that the belladonna treatment is not so generally, or at least so universally, accepted as it deserves; and in this I am borne out by the fact that in one of our best modern works upon the diseases of children—namely, Dr. West's—the very name of belladonna in connection with whooping cough does not once occur.—*London Lancet.*

A FEW REMARKS ON ASTIGMATISM.

BY J. F. BUMSTEAD, M.D., SURGEON TO THE NEW YORK EYE INFIRMARY.

I do not propose to write a complete essay on astigmatism. As the term, however, may be new to some readers, a few words in explanation of its meaning may be desirable.

The surface of an ordinary double convex lens may be supposed to have the curvatures of all its sections equal. This is, indeed, essential to make such a lens a useful optical instrument; for suppose the curvature of one section to be greater or less than that of another—in other words, suppose the optician to have ground the two surfaces of the lens unevenly—no clear and distinct image of any object can be obtained through it, because the rays of light striking upon different portions will be unequally refracted, and will fail to come to a focus and form an image in the same plane.

Now simply substitute the word *cornea* for the word *lens* in the above remarks, and you have an explanation of astigmatism. A typical cornea, one of the refracting media of the eye, may also be regarded as a surface of revolution with the curvatures of all its sections equal;* hence rays of light proceeding from a luminous

* Strictly speaking, the normal cornea is not a surface of revolution, since the curve of the horizontal plane is usually less than that of the vertical; but the difference is only regarded as a disease when it exceeds ordinary limits and is capable of being corrected by cylindrical glasses. In this paper, which is intended to be purely elementary, normal astigmatism may be ignored.

point and striking upon various parts of its surface are equally refracted, and passing through the other dioptric media of the eye, are brought to a focus at one point within the globe. But in the astigmatic eye nature has not ground the cornea in an equal manner; its curves vary to a greater or less degree; thin sections cut in various directions and placed one upon another will be found, if critically examined, not to correspond. Hence rays of light proceeding from a luminous point and passing through such a cornea, are not brought to a focus at a single point within the globe, but each distinct place of refraction has its own focus; and hence the origin of the name (probably not the best that might have been chosen) from *a*, privative, and *stigma*, a point, signifying without a point or focus within the eye to which rays of light converge.

Nature preserves a certain regularity even in the irregularity we are now considering. She does not select at random one of the infinite number of planes which may be supposed to pass through the antero-posterior axis of the eye, as the one which shall present a curve greater or less than the normal curve of the cornea; but it is commonly either the vertical or the horizontal plane, or one nearly approaching them, which is thus defective. Suppose it to be the former, or vertical plane, and suppose also that the curve of the cornea in this plane is too convex; then the rays of light entering the eye in this plane will be too strongly refracted, and will come to a focus in front of those rays which enter in the horizontal plane (supposed to possess the normal curve); in other words, the patient will be myopic in the vertical meridian of his eye, although his sight is normal in the horizontal meridian; and when looking at a distant object, he will see its lateral edges distinctly, while its upper and lower edges will be blurred. Again, instead of being too convex, the curve in the same plane may be too flat, when the rays of light in the vertical meridian will come to a focus behind those of the horizontal meridian, and the patient will be hyperopic in the vertical plane; or, again, the vertical meridian may be normal while the horizontal meridian is either myopic or hyperopic; while, still again, both the vertical and the horizontal meridian may vary from the normal type, both being either myopic or hyperopic, but each to a different degree, or the one may be myopic and the other hyperopic. Thus it will be seen that the term astigmatism, although always applied to a variation in the refractive power of the eye in different planes, may include a considerable variety of pathological conditions.

An excellent history of our knowledge of astigmatism may be found in the well-known volume of Dr. Mackenzie upon diseases of the eye. The disease was first discovered by Mr. Thomas Young in 1801; a remarkable instance of it in his own person was reported by Mr. Airy, Astronomer Royal, in 1827; a few other cases were also brought to light by various observers; but neither the frequen-

cy, the symptoms, nor the treatment of the disease were fully appreciated until the publication, in 1862, of Prof. Donders's work, entitled "*Astigmatismus und Cylindrische Glaeser.*" With regard to its frequency, Prof. Donders states that he has met with it on an average in one out of every thirty eyes that he has examined. The symptoms of this disease and the means of diagnosis will appear in the report of the following case:—

Mr. L. F., aged 38, a lawyer by profession, applied to me May 3d, 1863, for "dimness of vision," which had troubled him for the last twenty years. He had been under the care of several surgeons, who had treated him for "amaurosis" or "asthenopia." His own account of his symptoms was obscure and unsatisfactory, and amounted to this:—that he could not see well, especially after mental excitement or bodily fatigue; that, for instance, when trying a case in court, or after a late supper or excessive smoking, he found it extremely difficult to use his eyes; and that he had tried many kinds of glasses without benefit. Nor did the ordinary methods of examination afford any better clue to the nature of his disease. I found on trial that he could read No. 20 of Dyer's tables at twenty feet. His power of accommodation was normal for his age. There was no insufficiency of the internal recti, nor any defect in the other muscular apparatus of the eye. Upon examination with the ophthalmoscope, the fundus oculi and dioptric media appeared to be perfectly healthy.

Although puzzled for a moment at this result of my examination, the thought soon occurred to me that this might be a case of astigmatism, and I proceeded to question my patient more closely with regard to his symptoms. I asked him if, in looking at an object, he ever saw one portion of its outline more distinctly than another. He replied yes; that in walking through the street at night and looking at a lighted window, the upper and lower edges appeared blurred, while the lateral edges were distinct. Again, in looking at a sign across the street, there appeared a second series of letters, fainter than the true image, and overlapping the latter above and below, and he had observed that this was the case whether one or both eyes were open. This indistinctness of the outline of objects in a vertical direction never entirely disappears, but varies greatly according to the condition of his nervous system. Under ordinary circumstances, it is noticed only when looking at objects which present a marked contrast in color or brightness, as the lighted window and gilt letters upon a black sign, just mentioned; but let him be fatigued or excited, and the dimness appears to affect all objects—even the figures upon the carpet, the ordinary type of a book, or newspaper, &c.

Taking up Snellen's tables of test type, and selecting the one in which the letters are white upon a black ground, I now requested the patient to describe their appearance. He voluntarily placed

himself at a distance of about eighteen feet, and looking at the capital C of No. 100, told me that he saw a second image overlapping in a vertical direction the true image and with its upper edge about half an inch above the latter; also, when regarding the smaller letters of No. 20, he saw a complete reduplication of the figures projected upon the black ground above. In both instances the lateral margins of the letters remained distinct, and the effect was the same if either eye was closed. Having cut a narrow slit in a card, I placed the fissure in a horizontal direction before one eye, the opposite being shut, when the patient immediately exclaimed that the indistinctness of outline had disappeared; but on the contrary, it was heightened, when the position of the fissure was changed to vertical. Other similar tests were also applied. For instance, the holes in an ordinary catheter gauge held before an argand burner appeared to the patient not as circles, but as ovals with their longer axes vertical, and this direction was changed to the horizontal if he inclined his head to a right angle with the axis of his body; moreover, the normal circular image was brought out by looking through a slit in a card in the manner above described.

It was now evident that my supposition was correct, and that there was a defect in the refractive power of the eye confined to the vertical meridian; it remained to discover in what this defect consisted, whether myopia or hyperopia, and also its degree. For this purpose I placed him under such conditions as would render the indistinct vision most marked, viz., with the slit in the card in a vertical direction so as to cut off the horizontal rays; and trying various glasses both convex and concave, I soon ascertained that several of the latter diminished, and that a double concave glass of 30-inch virtual focus completely removed the difficulty. My patient was, therefore, myopic to the extent of 1-30 in the vertical meridian of each eye, while his vision was normal in the horizontal plane.

In a second examination with the ophthalmoscope I observed a phenomenon which previously escaped me. If an astigmatic eye, owing to the defective refraction of its media, sees a circle as an oval, a circle at the fundus of an astigmatic eye should appear oval when seen by a normal eye, since the rays of light undergo the same refraction in passing from, as when entering, the organ of vision. Such a test is to be found in the circular outline of the optic nerve entrance. This test of astigmatism was first pointed out at the Ophthalmic Congress at Heidelberg, in 1861, by Dr. Knapp, who showed that in examining by the upright image, the diameter of the optic nerve entrance appears longest in the meridian of the greatest curvature of the cornea, and shortest in the meridian of least curvature; while the contrary is true, when the reversed image is employed—a statement which I was able to verify in the case of Mr. F.

Astigmatism is relieved by the use of cylindrical glasses—lenses,

the surfaces of which are cylindrical instead of spherical, and which therefore refract in one meridian only. In the present case, double concave cylindrical glasses of 30-inch virtual focus, with the axes of the cylinders horizontal, completely removed the defect of vision. When the use of glasses was first suggested to Mr. F., he did not hesitate to express his belief that they could be of no benefit to him whatever; but after a moment's trial he was convinced of the contrary, and expressed his delight with almost childish exuberance of joy at the relief which they afforded.

Cylindrical glasses cannot at present be made in this country, or at least in New York, to which my knowledge in this respect is confined; but they may readily be procured of Messrs. Paetz and Flohr, of Berlin, or of Natchez et fils, Paris. A complete set should be included in the armamentarium of any one who makes a specialty of eye diseases.

The defect in the conformation of the cornea upon which astigmatism depends, is congenital. I explain the fact that in the present instance it did not annoy the patient until about the age of eighteen, upon the supposition either that it passed unnoticed, or that, like hyperopia, it was compensated for by the high degree of accommodation of early life. The latter explanation is supported by the influence of mental excitement and bodily fatigue in aggravating the annoyance which the disease occasioned.—*American Med. Times.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 5, 1863.

DR. H. R. STORER ON CHLOROFORM IN MIDWIFERY.—Dr. H. R. Storer's paper on the employment of Anæsthetics in Obstetric Medicine and Surgery, published in last week's JOURNAL, is calculated to attract much attention, advocating, as it does, with much earnestness, the use of chloroform alone in this department of practice. Expressing opinions so directly at variance with those which the Editors of this JOURNAL have uniformly held and advocated, our readers will naturally look for some comments from us upon the subject. Without pretending to discuss Dr. Storer's argument in full, for we have as yet not had time for the mature consideration of all his theories, we propose briefly to refer to some of his points and statements.

First, as to the reported cases of death attributed to the use of chloroform in labor. These Dr. Storer dismisses with the simple statement that "to the present date, so far as I am aware, there does not exist on record, from the thousands of obstetric cases in which chloroform has been used, a single instance where death can be legitimately attributed to its influence." Now it really seems to us that in a question of such serious importance, in a paper of such an elaborate and positive

character, the profession have a right to ask for something like proof of so grave a statement; for surely no authority in the profession is high enough to be independent of such corroborative evidence. It happens that this very day we have read a carefully written article on the use of chloroform, published in the *Medical Times and Gazette* of September 26th, by Mr. Arthur Ernest Sansom, M.B., late House Physician and Physician Accoucheur Assistant at King's College Hospital. The object of this paper is to *advocate* the use of chloroform, to show the class of cases in which it should be used, to explain the cause of death in fatal cases, and to lay down rules for its employment. The paper is very carefully written, and of course the author is anxious to exclude from his bill of mortality all the cases that he can. It contains an analysis of eighty-four cases of death from chloroform, of which the author says, "these, collected a year ago, were all which I could find narrated with sufficient care to enable me to found any broad conclusions upon them." Of these, *three* were due to the use of chloroform in "*natural labor*." Quite a number of such cases have been published from time to time in the journals, but probably they were thrown out by the author as unsatisfactory. These three, however, this critical writer admits without question.

The alleged cases of chloroform death in labor, Dr. Storer refers, first, to the impurity of the article used. Dr. Storer subsequently lays much stress upon this point of purity. Now every physician, of course, desires that every drug that he employs should be as free from impurity as possible; but we think the element of impurity has been made altogether too much of a scape-goat of the dangerous qualities of chloroform itself. The question is, will *pure* chloroform kill, and that so suddenly as to give but little opportunity for the use of antidotes to its terrible power? We are strong enough in our national prejudices to believe that pure chloroform can be as well made here as over the water. Duncan & Flockhart are doubtless manufacturers of a pure article; Dr. Storer's assurance is all we want on that point; and yet it happens that in a number of the fatal cases of chloroform inhalation *the chloroform of these manufacturers had been used*. In one of the most carefully-reported cases by Mr. Paget, this was the fatal agent, and a portion of the *same* lot was subsequently used in several instances with impunity. So far as this goes it proves that *pure* chloroform, even Duncan & Flockhart's, is dangerous. The extreme rapidity of the action of chloroform must not be kept out of view in this connection. In Mr. Sansom's paper one of the recorded deaths is of a man, twenty-four years of age, in *half a minute*,—and of twenty-seven deaths which occurred within ten minutes, *fifteen took place in less than two minutes* (*Brit. Med. Jour.*, Feb. 21st, 1857). Surely there is danger that an agent so rapid in its operation may sometimes be given in a dose disproportionate to the pain of labor which it is intended to annihilate, and overwhelm the patient at the same time.

Next, the agent was fatal because improperly administered. And here we may refer to a note on page 257, in which Dr. Storer attributes to a remark of our own, in connection with a paragraph quoted from Dr. Kidd, a significance which does not properly belong to it. We expressed a fear that the fullest knowledge would not disarm chloroform of all its dangers, *not* that its dangerous character was a reason

for omitting to learn all we can about it ; quite a different suggestion certainly.

We cannot agree with Dr. Storer that the effects of chloroform are much more transient than those of ether. Indeed it is to the reverse of this that we have attributed much of the danger from its inhalation. The extremely volatile character of ether, as every day's experience shows, promptly relieves the system of its narcotic power, so that we feel perfectly sure that any threatening symptoms of asphyxia will vanish at once on the removal of the sponge. Chloroform, on the other hand, is a substance of so much greater density, that when alarming symptoms arise, the deadly power of the vapor already in the lungs has still full opportunity to work. Dr. Storer himself says its weight is "such as after a few inspirations to fill and almost hermetically seal the lungs by its mere gravity," and he accordingly recommends that the patient be placed upon her side that this heavy vapor may have a more ready escape.

We have not touched upon the question of the correctness of Dr. Storer's theory, that the peculiar condition of the parturient female is in itself a protection against the dangers of chloroform inhalation. We certainly are not prepared to admit this assumption without more deliberate consideration than we have yet been able to give to so important a subject.

THE subject of the following communication is one the importance of which can hardly be exaggerated. The unfortunate victims of the vice to which it refers are among the most pitiable objects to which our professional sympathies are ever directed. The experience of nearly every physician must have furnished him with cases of this kind of the most embarrassing character. Household restraints and home influence are little better than worthless in these cases, and the prospect of an asylum where they can be received and tenderly cared for will bring an indescribable relief to many. We have no means of knowing how extensive a provision is required for the purpose in our own State, but we hail the commencement of this movement with the greatest satisfaction, and hope it may meet with the signal success which it deserves.

RETREAT FOR INTEMPERATE WOMEN.—The necessity of making some special provision for the victims of intemperance, partly for the benefit of the individual and partly for that of the community, is beginning to attract general attention, and the subject in its various bearings has been brought before the State Board of Commissioners on Insanity, as among the matters deserving their serious consideration.

Aside from the question of establishing a public asylum for inebriates, the advantages of which would be more naturally confined to the middle and lower classes, it appears that there is as yet in New England no place of refuge for intemperate women of good social position except the public and private lunatic asylums, which are unfitted, in the almost unanimous opinion of their superintendents, for the reception of such cases ; at many asylums, indeed, admittance being refused to them, alike in justice to the other patients and to the inebriates themselves. The number of applications at the New York General Asylum at Binghamton far exceeds the possible capacity of

the building, while the Washingtonian Home in Boston, whose influence for good is already so extended, is for men alone.

In accordance with this apparent want, arrangements have been made by which there will be afforded to a limited number of self-indulgent women, whether addicted to opiates or stimulants, the necessary elements for their cure; namely, voluntary seclusion from temptation, the strictest privacy if desired, a location in the immediate vicinity of the city and yet unrivalled for purity of atmosphere and beauty of scenery. The house selected for the purpose is one constructed with especial reference to a comfortable residence during the winter; attendants will be provided of unexceptionable character, and but few patients will at present be received. For further information application may be made to the Secretary of the Commission, Dr. H. R. Storer, at Hotel Pelham; the other members of the Board being Hon. Josiah Quincy, Jr., of Boston, and Dr. Alfred Hitchcock, of the Governor's Council, of Fitchburg. It may be stated that the step now taken has the cordial approval and endorsement of His Excellency Governor Andrew, Judge Hoar of the Supreme Court, Drs. James Jackson, Jacob Bigelow, John Jeffries, H. I. Bowditch, J. Mason Warren, Tyler of the Asylum at Somerville, Jarvis of Dorchester, and other of our more prominent citizens.

INVESTIGATIONS TOUCHING THE USE OF IODINE.—Dr. Rosenthal, assistant physician at the Vienna General Hospital, has published, in the *Wiener Med. Wochensch.*, a series of papers containing much original matter touching the therapeutic use of iodine. The summing up is as follows:—

1. Large doses of iodide of potassium, combined with a small quantity of fluid, remain a long time in the economy; with large quantities of fluid, they are quickly washed away from the system and pass rapidly into the secretions and excretions. This circumstance should be carefully noticed.

2. When iodide of potassium is taken internally, it is found, not only in the urine, saliva, and other secretions, but also in the alvine evacuations, within from four to seven hours, whether the stools be aqueous or the reverse.

3. In the administration of iodide of iron, iodine is separated in considerable quantities and found with a large proportion of the iron in the urine. Fæcal matter contains much iron and a small amount of iodine. The same phenomena may be noticed when iodide of mercury is used.

4. Frictions with an ointment containing iodide of potassium upon sound skin will cause the iodine to be detected in the urine and saliva.

5. Iodine is found in the urine of those who take baths in which iodide of potassium is dissolved, even when the rectum and urethra are kept free from the action of the bath. This is proved by examining the urine, and by noting a large diminution of the iodine in the water used for the bath.

6. The intestinal mucous membrane takes up iodine very energetically in the form of enemata, and this is the case even with very weak solutions of iodide of potassium.

7. Large doses of iodide of potassium, or small doses taken for a long time, are not well borne in certain pathological states of the eco-

nomy; in fact, large doses of iodine, or concentrated solutions, are very prejudicial to the system.—*London Lancet*.

LOSS OF LIFE IN COLLIERIES.—In 1862 there were 738 fatal accidents in collieries in Great Britain, causing 1133 deaths. Such a terrible mortality does not indicate the efficiency of the inspectorship of mines as the public have been led to anticipate. Accidents affecting life amongst the mining population are in the majority of instances preventable. There are many difficulties in carrying out precautionary efforts for the salvation of life, but these are not insurmountable. The ignorance of workmen is a fertile cause of mischief. This ignorance must be met, as it no doubt will be, by the spread of information amongst those immediately interested.—*Ibid*.

A YEAR'S RAILWAY WORK IN GREAT BRITAIN.—In the year 1862, the enormous number of 180,429,071 passengers travelled on the railways of the United Kingdom, besides 56,656 season-ticket holders, who, of course, travelled very many times; and besides, also, 262,334 horses, 386,864 dogs, 3,094,183 cattle, 7,800,928 sheep, and 1,989,892 pigs. The passengers were more than in 1861 by about 7,000,000. They paid £12,295,273 for their fares. The first-class passengers paid £3,332,380; the second-class, £4,018,221; the third-class, 4,639,250. 12·80 in every hundred went first class, 28·75 second class, 58·45 third class. The proportion of third-class passengers is rather increasing, and of second-class rather diminishing. Thirty-five passengers were killed (nine of them owing to their own misconduct or want of caution), and 536 were injured. This is less than half the number who lost their lives in 1861 by railway accidents.—*Hunt's Merchant's Magazine*.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 31st, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	38	51	89
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.7	35.4	70.1
Average corrected to increased population	00	00	76.67
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
15	7	0	5	1	1	6	1

ERRATUM.—Page 272, 14th line from the bottom, for "*Ludger, Lallemand,*" read *Ludger Lallemand*.

DIED.—In West Granville, Sept. 11th, Dr. Vincent Holcombe, aged 68.

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 31st, 89. Males, 38—Females, 51.—Abortion, 1—accident, 3—apoplexy, 1—congestion of the brain, 1—disease of the brain, 1—bronchitis, 1—cancer, 2—cholera infantum, 1—cholera morbus, 1—consumption, 15—convulsions, 2—croup, 7—cystitis, 1—debility, 1—diarrhoea, 1—diphtheria, 1—dropsy, 3—dropsy of the brain, 5—drowned, 1—dysentery, 1—epilepsy, 1—bilious fever, 1—typhoid fever, 6—typhomania, 1—disease of the heart, 2—intemperance, 1—infantile disease, 2—disease of the kidneys, 1—inflammation of the knee, 1—inflammation of the lungs, 5—marasmus, 2—measles, 1—mortification, 1—old age, 2—paralysis, 2—premature birth, 2—smallpox, 1—unknown, 7.

Under 5 years of age, 30—between 5 and 20 years, 11—between 20 and 40 years, 21—between 40 and 60 years, 16—above 60 years, 11. Born in the United States, 55—Ireland, 27—other places, 7.

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No. 15.

POLYPUS OF THE RECTUM.

[Read before the Suffolk District Medical Society, Oct. 31st, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY HOWARD F. DAMON, A.M., M.D., ONE OF THE PHYSICIANS, AND SUPERINTENDENT OF THE BOSTON DISPENSARY.

HAVING had a case of polypus of the rectum, during the present week, it occurred to me that it would be interesting to know something of the frequency of this disease, its diagnosis, and means of treatment. Knowing, from careful inquiries directed to this subject for several months, under the most favorable opportunities for observation, that it seldom if ever occurs in adult life, and rarely in children, some of the various authors upon diseases of children were consulted, with the following results.

Riliet and Barthez, in their *Maladies des Enfants*, have made no mention of the subject; neither have Evanson and Maunsell, West, Dewees, or Meigs. Condie has treated of it at some length. According to this author, M. Stoltz and M. Guersant have each met with a few cases; and M. Gigon has given the history of six cases, three of which were under the care of his colleague, M. Brun. These polypi were fleshy, of a red color, and suspended by a slender pedicle. They were but slightly vascular under the microscope; but one of long duration was fibrous. Their place of attachment was from a few lines to two inches from the anus. Hæmorrhage seldom followed the rupture of their pedicles; but in one case it was severe after excision. According to M. Gigon, they may be confounded with dysentery, hæmorrhoids, and prolapse of the rectum. But upon careful examination, we shall find many distinguishing marks. Prof. James Syme is mentioned as having seen a form of polypus of which he had met with only one case in children beyond the ninth or tenth year. It was soft, vascular, florid red, resembling a strawberry, and having a pedicle two or three inches long. A similar case has been described by M. Bourgeois, and another by M. Perrin; the latter was removed by the nails.

Andral makes no mention of the subject in his "Clinique Médicale." Rokitansky and Wedl have mentioned other varieties of

polypus, but not that of the rectum. Dupuytren, in his "Lesions of the Vascular System, Diseases of the Rectum, and other Surgical Complaints," does not allude to this variety. No notice of this disease occurs in the works of Hasse, Watson, Wood and other voluminous authors. M. Bouchut does not appear to have seen one himself, although he makes use of the descriptions of others. He gives a case from M. Perrin, which occurred in a girl two and a half years old, to whom the latter was called ten times to extract while it was down, but always, until the last time, arriving too late. It was mammillated, deep red, raspberry-like. The pedicle was ruptured by the nail, and the hæmorrhage was only slight. He mentions Bourgeois as having published four cases. He also removed them by the nail.

Sir Charles Bell met with a few. He speaks of them as soft and resembling a strawberry. He used the needle and ligature.

Erichsen barely mentions their existence; and Druitt only devotes a couple of lines to this subject.

Mayo and Syme have given more attention to the study of this disease. Mayo, in his work entitled "Observations on Injuries and Diseases of the Rectum," makes no distinct mention of polypus of the rectum; but one or two of his cases which are classed in the section on inward piles, were no doubt of this nature. In this section he gives six cases, five of which were in middle or advanced life; the remaining one is so interesting in connection with this subject, as to be reported.

CASE.—"A little girl, eleven years of age, was brought to the Middlesex Hospital by her mother. She had, during the preceding half year, repeatedly lost blood by stool, and at each motion something protruded. Upon examining the part after the bowels had acted, a small pile not bigger than a large pea, of a red color, and supported upon a long narrow pedicle which had not much appearance of vascularity, was seen. The child appeared to be in perfectly good health, and no objection presented itself to tying the hæmorrhoid at once. Accordingly, I applied a ligature to the slender pedicle of the hæmorrhoid; but being drawn too tightly, the thread cut through the part, and the pile came away at once. No disposition to bleed showed itself at the time; but the following night the child lost a profuse quantity of blood, and came to the hospital the following day faint and pale and reduced from the bleeding. The hæmorrhage did not recur."

Professor Syme, in his monograph "On Diseases of the Rectum," speaks of the rare occurrence of these morbid growths from the mucous membrane of the rectum. He says that Sir Astley Cooper in the whole course of his experience met with only ten cases of polypus of the rectum; that in these cases it was generally met with in children, rarely in adults; the oldest person in whom he has seen it was twenty-two.

Syme, on the contrary, only met with it in persons of middle or advanced life; and then singly. He describes the tumor as round or of a pear-shape, varying in size from that of a pea to a hen's egg, and smooth or lobulated in appearance, with a narrow pedicle attached within an inch or two of the anus. In consistence, it was either firm or soft to the touch as the mucous membrane of the bowel. Its symptoms, he thinks, resemble those of hæmorrhoids, unless it protrudes from the anus. He thinks that the ligature should be preferred to excision, as being less dangerous. He saw a case, with Dr. Histon, in a lady upwards of seventy years of age, in whom it appeared to have existed for twenty years, protruding at times beyond the anus. A ligature was passed through the pedicle, and the two halves tied with a separate thread. The patient recovered without any inconvenience. He gives another case which he saw with Mr. Craig, in a woman forty-four years of age, which had probably existed for many years, giving rise to occasional hæmorrhages and other distressing symptoms. This was also removed by ligature.

Baron Boyer, in the sixth volume of his "*Traité des Maladies Chirurgicales*," speaks of polypi of the rectum. He describes their situation, figure, volume and texture; the symptoms produced by them, and the means of arriving at their diagnosis. In examining for them, he was accustomed to give an enema of cold water, in order to overcome the contractions of the sphincter ani, and at the same time to bring down the polypus with the injection. He used the ligature around the pedicle, and excised the polypus below it. If hæmorrhage ensued he used astringent injections, and, if necessary afterwards, the tampon. He gives a case from Desault, in which the polypus was situated very high up, and ligatured by him with the same instruments which he used in cases of uterine polypus. Boyer thinks it very dangerous to ligature anything beyond the reach of the finger, as the supposed polypus may be an invagination of a portion of the colon in the rectum.

Boyer describes a case of his own, which he thinks is analogous to polypus. It was in a boy of about fifteen or sixteen years of age, and was of the volume of the two fists. It returned in the course of eight months after ligature and excision. It was again operated upon, but the patient was afterwards lost sight of, and the result is unknown. He mentions a similar one from Trioen, which occurred in a woman thirty-six years of age; it was excised, and another similar one appeared on the opposite side, and the woman died of a foetid and gangrenous suppuration of the rectum. This was, most probably, either a malignant or syphilitic disease.

According to Boyer, Le Dran has described, under the name of hæmorrhoids, a tumor which was nothing else than a polypus of the rectum. This occurred in a man over sixty years of age. It

was of large size and produced a prolapse of the rectum at every stool, and was returned with difficulty. It was operated upon by Le Dran by ligature and excision, and a tampon was applied. Recovery was complete. The above tumors can hardly be called polypi of the rectum.

The following notices of this disease are translated from some of the best French authors upon the subject.

A. GUERIN (*"Chirurgie Opératoire."*)—The polypi which are developed upon the mucous membrane of the rectum occupy ordinarily the neighborhood of the anus, but as they are a long time hidden in the interior of the intestine, the patient is obliged to make efforts at defæcation in order to expel them beyond the anal orifice.

Ligature, excision, and the application of caustics present nothing peculiar for polypi of the rectum. Excision is the method which has been generally preferred, because it is very expeditious and does not give place to the hæmorrhages or returns which are so frequent in regard to polypi of the nasal fossæ. Tearing them away is not at all proper for polypi of the rectum, on account of the facility with which the mucous membrane of this part of the intestine becomes displaced.

NELATON (*Pathologie Chirurgicale*).—Polypi of the rectum are not very common; however, they are observed more frequently in this region than in any other part of the intestinal canal. According to Stoltz (and this remark is found confirmed by an attentive study of facts), this affection is met above all in children, where it is confounded with prolapsus of the rectum.

Pathological Anatomy.—Polypi of the rectum are sometimes simple, sometimes multiple; ordinarily smooth, regular, very often they are pediculated, more rarely with a broad base; their color recalls that of internal hæmorrhoids. They have sometimes many lobes. Boyer removed one which resembled a calf's pluck. Le Dran another, which resembled a bunch of grapes suspended by its stem. The volume of polypi of the rectum is very variable; there are those of scarcely the size of a hazel-nut, whilst others may attain that of a pullet's egg.

What is the structure of these tumors described under the name of polypi of the rectum? The pathological anatomy of this species of production leaves little to desire; the greater part of polypi of the rectum are soft and fleshy; fibrous polypi are exceedingly rare. M. A. Forget has found a case: the patient in whom he observed it was a young lady twenty years of age; this polypus, of the volume of a small egg, had a pedicle of several centimetres in length, formed by the mucous membrane behind which the tumor had taken its origin. It is extremely probable that a certain number of polypi of the rectum are due to a follicular hypertrophy. In a patient whom we have observed in the "*hôpital des cliniques*," we have demonstrated the following arrangement: the surface

of the tumor was smooth, as covered by the mucous membrane, and it was pierced by many small orifices which conducted into little cells; the aspect of the tumor recalled that of the tonsils. This fact ought to be compared with that which has been described by Gerdy; in a polypus of the rectum, this surgeon has shown a cavity containing hardened fæcal matters and nuclei similar to grains of wheat; it is probable that in this case the fæcal matters are engaged in the little cells analogous to those that we have met upon the tumor which has been given us to examine, and have formed the nuclei the existence of which would seem so surprising. Everything, then, leads us to think that in certain cases polypi of the rectum are nothing but hypertrophied follicles.

The seat and mode of insertion of these tumors offer a great interest in the point of view of symptomatology, and above all of operative medicine; thus some are situated at the margin of the anus, others are implanted much higher up in the rectum, so that it is sometimes difficult to reach the pedicle for the purpose of applying the ligature.

Symptomatology.—Polypi of the rectum do not present any characteristic symptom by which they may be recognized at their outset; they impede the excretion of fæcal matters, they sometimes cause very lively pains at the moment of defæcation, and give a feeling of weight to the perinæum; they also give place to sanguinolent oozings and even to hæmorrhages sufficiently abundant to cause anxiety and to compromise the health of young children. When they are situated in the interior of the intestine, they come out at the moment of defæcation; they can often be reduced with facility. The finger, introduced into the rectum, makes known the existence of a smooth tumor, soft, elastic, supported upon a more or less narrow pedicle, sometimes reflected downwards in consequence of its weight, which tends to precipitate it towards the anus. The rectal examination is rarely indispensable in order to make known the existence of a polypus; it is sufficient to examine the little patients after a stool, or, if that does not answer, to excite their dejections by a gentle laxative.

There are cases in which the insertion of a polypus is so high that the tumor cannot appear at the time of defæcation. The diagnosis is less easy; M. Guersant has remarked that the fæcal matters present in this case a furrow creased upon the fæcal bolus by the polypoid tumor.

The progress of this affection is generally very slow. It is not rare for polypus to disappear spontaneously by the spontaneous rupture of the pedicle, or by the pressure which the fæces exercise from above downwards upon the most voluminous part of the tumor. M. Enaux has observed a case; we will publish an extract from this observation, less curious from the point of view of the spontaneous detachment of polypi of the rectum than of the accidents occasioned by ligature.

A patient, aged thirty-six years, never having enjoyed good health, experienced lively pains in the abdomen, weight in the seat, &c. After a purgative, a globular tumor was voided, and hæmorrhage took place. The tenesmus came on anew, and did not cease until the passage of a new tumor similar to the first; it was as large as a pullet's egg, its surface was smooth, its substance spongy; it had a membranous pedicle, very short and fringed; a third tumor was entwined by means of the canula of Levret and a catgut. . . . The symptoms having been renewed, fever was lighted up, and the patient perished.

At the autopsy, the rectum was found thicker than usual; there were seen, upon the internal surface, some superficial papillæ, which, by their hardness, appeared to be the cicatrices formed at the time of the separation of each tumor.

Etiology.—Polypi of the rectum are, as we have said, infinitely more frequent in children than in adults. In his memoir upon this affection, M. Stoltz has collected together fifteen observations: the oldest of the subjects in which this affection has been observed, was a girl of twelve years of age; the youngest was two years. Since the publication of this work, new facts have been collected, and almost always the tumors are found to exist in children under ten years of age.

The causes of this affection are very obscure. M. Stoltz thinks that the sole causes which have appeared to act in an appreciable manner upon the production of rectal polypus, are prolapse of the rectum and the causes which predispose to this infirmity. He thinks, also, that the polypus can produce itself by a mechanism of its own: in the repeated prolapse of the rectum it may happen that a portion of the mucous membrane may be compressed by the sphincters, and, becoming engorged, swelling so as to become pediculated and the origin of a polypus.

Diagnosis.—Nélaton thinks the diagnosis easy when they are situated in the inferior part of the rectum; above all, when they protrude at each effort at stool. They are very often confounded with prolapse of the rectum, from which they can be easily distinguished by their form, color, and, above all, by the absence of the central orifice observed in prolapse of the rectum.

They have also been confounded with hæmorrhoids. But in these there is often a character of periodicity, in regard to the hæmorrhage, which is not found in polypus of the rectum. Besides, the hæmorrhage from the latter occurs only at stools. Moreover, polypi of the rectum almost always occur in young children, and hæmorrhoids in advanced life. He thinks that we need not doubt the certainty of our diagnosis of polypus of the rectum, in a child under seven years of age who passes a certain quantity of blood from the anus upon each evacuation of the bowels. He makes use of ligature, evulsion, and excision; and in cases of much hæmorrhage, he

uses the tampon, saturated with a solution of perchloride of iron, or even makes use of actual cautery.

Lebert, in his "*Anatomie Pathologique Générale*," devotes a chapter to hypertrophies of the mucous membranes, or mucous polypi. He says: "Polypi of the rectum have a very great pathological importance. These polypi readily give place to hæmorrhages, to a prolapse of the mucous membrane, to a state of chronic inflammation, to a dysenteriform diarrhœa, and sometimes they become the point of departure of serious troubles. We have seen them attain the volume of a walnut, but in general their volume varies between that of a small pea and of a hazel-nut. Sometimes they are found multiple; it is thus that I have examined a score of these tumors coming from a young girl aged seventeen years, treated by M. Robert at *l'hôpital Beaujon*. In all the cases which I have examined thus far, I have found, as an essential element of these polypi, a considerable agglomeration of very elongated follicles, presenting a cylindrical epithelium very distinct in their interior, while the epithelium of the intestine, at this place, is pavement; as these glandules do not exceed the volume of those which are met with in the normal state in the rectum, it is probable that there are many glandules of new-formation in these little tumors. Fibrous polypi, however, have also been observed in this region. M. Huguier has presented a remarkable example of one to the *Société de Chirurgie*, July, 1850: the tumor, of the volume of an egg, had its attachment a half inch above the anus; the excision had been made after ligature of the pedicle. The woman who had this tumor was about forty years old; she had suffered for many years, and, not having been examined in a thorough manner before having consulted M. Huguier, she simply supposed she had hæmorrhoids. It is probable that there takes place, in these cases, an hypertrophy of the submucous cellular tissue. The following is his account of one. This tumor, removed by an operation, has the volume of a hazel-nut. Its consistence is of an elastic softness, its color a little deeper than that of the surrounding mucous membrane. One can easily convince himself that the whole of this tumor is composed of a considerable development of the mucous follicles of the rectum, which have a very elongated form, united together, a little larger at their extremities than at their origin, presenting the appearance of elongated stomata. The whole mass is composed of an agglomeration of these glandules, which are filled in their interior with a cylindrical and nuclear epithelium. The numerous polypi of the rectum which we have had occasion to examine, all offer the same composition.

The following is a brief history of my own case:—

CASE.—Thomas Lynch, four years of age, August 1, 1863. About a year ago, when in the country upon a summer afternoon with his mother and another woman, the latter noticed the little boy, while trying to have a stool, appeared as if his body was down, as the

common saying is. It was the first time the mother's attention had been called to it. Ever after this she noticed a similar appearance whenever the boy was at stool; and also the passage of a small amount of slimy material and blood, which stained the sides of the nates and the seam of the boy's drawers. During the past year the boy has often gone to stool without any other evacuation than a small amount of watery or glairy material and a little blood. He has sometimes got up in the night and sat a long while straining upon the pot without any apparent evacuation. During the past summer he has been troubled with a watery diarrhoea, which did not attract much attention, because the other children were somewhat similarly affected. Perhaps the diarrhoea was merely accidental, but it was of a mucous kind, according to the description of the mother, and might have been aggravated by the presence of the polypus in the child's rectum. A year ago, the child was very healthy and rosy; he has become thin, and is paler than he used to be. On Tuesday last, the mother consulted me for a bronchitis under which he is now laboring; but mentioning, also, that he had a little diarrhoea and passed some blood, she was questioned further, and the symptoms of a polypus of the rectum were detected. At noon, I visited her house, with another gentleman, for the purpose of making a more thorough examination. The boy was placed upon the mother's lap, and, after some persuading, forced down his anus, and the end of the polypus came in sight. I oiled my finger and passed it up beside the polypus, and drew it down so as to hold it between the thumb and forefinger of the left hand. A needle, with a suture, was then passed through its pedicle, which was attached at about an inch up from the anus on the left side of the rectum, and was a third of an inch in diameter. The ligature was then tied, passed through the polypus itself, carried up between the nates, and made fast to a strap of adhesive plaster, in order to secure the polypus when it should be detached. The polypus, when first examined, was about the size and shape of a small chestnut, divided into three lobes—one large and two smaller ones—which were further subdivided into numerous lobules, resembling a raspberry in shape and color. The neck was about half an inch in length, and a little paler than the polypus itself.

Tuesday, Oct. 27th, 5½, P.M.—Shrunk to one third of its original size, and darker in appearance. (Dr. Ellis visited the case with me.)

Wednesday, noon.—Much smaller and darker.

Thursday, noon.—Placed another ligature over the old one and drew it tighter. As the mother promised to keep sharp watch for the polypus when it should come away, the ligatures were not secured to the strap of plaster, from which they had broken.

Friday.—Did not call on patient.

Saturday, 5, P.M.—Called, and found that the ligatures came away

yesterday morning, by the boy pulling slightly upon them. Nothing escaped at the time, but it is probable that the polypus was already detached. There has been no bleeding since the first ligature was applied. Examination with the finger detected no polypus in the rectum; but the place of its attachment could be distinctly felt as a smooth, rounded prominence upon the mucous membrane. On withdrawing the finger, there was no blood upon it, as before. It was again introduced, without being oiled, and carefully examined upon withdrawal, with the same result.

CASE OF POISONING BY ARSENIC IN WALL-PAPER.

[Read before the Suffolk District Medical Society, Oct. 31st, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY WILLIAM E. RICE, M.D.

OLIVIA N., æt. 75, Cornwallis, N. S. Married. Has always enjoyed robust health. Has lived for the last four years in Marblehead. Four months ago came to Third Street, South Boston. A few days after her arrival, was attacked with a burning sensation in the fauces, throat and stomach; also slight and frequent vomitings, particularly after taking food. She has had frequent attacks of diarrhœa; has noticed blood in the dejections five or six times. These symptoms were always accompanied with great weakness and trembling of the limbs, and anorexia. Her symptoms were much aggravated Oct. 20th, 21st and 22d, and on the 22d I was called to attend her. At this time she was suffering from severe cramps in the stomach and bowels, as well as the burning sensations. Her pulse was 100, small and feeble; tongue loaded with a thick, brown fur; voice impaired; skin clammy; bowels constipated, very tender on pressure; violent vomiting on taking small quantities of food, either liquid or solid. She told me that her symptoms were much aggravated after sweeping and dusting her room. On examination, the walls of her room were found to be covered with paper rich in green coloring matter, which I inferred to be Scheele's green. On mixing it with ferrocyanide of potassium and applying heat to it in a reduction tube, it yielded an arsenical mirror, and in an open tube small crystals with an adamantine lustre.

Her treatment comprised sesquioxide of iron, the fever mixture of the Dispensary, demulcent drinks and spearmint tea; also a mild cathartic to evacuate any of the poison that might be in the bowels. In three days she was much relieved, but on the 30th she swept and dusted her room, and on the evening of the same day she sent for me, complaining of a return of her symptoms, with greater severity than ever before. I ordered an immediate change of residence, or the removal of the paper.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL
IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

OCT. 12th.—*Pelvic Abscess in a Non-puerperal Female.*—Dr. MINOT exhibited the specimen. The patient was an Irish girl, 17 years old, who entered the Hospital, Sept. 5th, for articular rheumatism, which had already lasted about four weeks, the acute stage having nearly terminated. The knees, ankles, shoulders, wrists and toes had been swollen and painful, and there was a soft murmur over the apex of the heart with the first sound. She had vomited a good deal, ever since the beginning of her sickness, and had had dysuria for more than a year, which, she said, came on after exposure to wet, and was very severe at the time of her entrance. She had always been regular until her last monthly period, when the catamenia failed to appear. September 6th, a tumor was noticed over the pubes, quite tender, dull on percussion, and hard in feel. It was thought that this must be the distended bladder, but the catheter being introduced, only a few ounces of urine were obtained. A fortnight after her entrance the tumor increased in size, extending towards the umbilicus. A few days later she had severe pain in the abdomen, coming on in the night, with vomiting of bile. There was extreme tenderness above the pubes, thirst, anxiety, and the pulse was 120. The tumor had disappeared. From this time there were marked symptoms of peritonitis, and the patient died, twenty-six days after her entrance. It is an interesting fact that from the moment of the disappearance of the tumor the difficulty in urinating was relieved.

At the autopsy, the peritoneal surfaces were found to be universally adherent by recent lymph. The cavity contained about eight ounces of chocolate-colored pus. There was a large abscess in the pelvis, the upper surface of which stretched across the vesico-uterine peritoneal fold. It contained several ounces of greenish, inodorous pus. On exploring the interior of the abscess with the finger, it was found to extend completely across the pelvis, resting on the uterus, roof of the vagina and bladder. The ovaries and Fallopian tubes were closely attached to the walls of the abscess by pretty firm adhesions, but nothing was seen which indicated that the disease originated in those parts. In the upper part of the abscess was a small opening communicating with the cavity of the peritoneum, through which its contents had probably escaped. The sigmoid flexure of the colon adhered intimately to the sac, but after a careful search no opening was found between them. The walls of the abscess were not united to the uterus, bladder, rectum or vagina. The hymen was perfect.

This case goes to sustain the opinion of Dr. McClintock, expressed in his interesting Clinical Memoirs on Diseases of Women, that pelvic abscess is more likely to burst into the peritoneum in non-puerperal than in puerperal women.

OCT. 26th.—*Foreign Body in the Trachea; Tracheotomy; Death.*—Case reported and specimen shown by Dr. HODGES.

A child, two years old, running down hill, fell, and was picked up choking and gasping. An older child who was with her said that they had been playing with beans. As the symptoms persisted, it was therefore supposed that one of these had passed into the trachea at

the moment of the fall. The accident occurred in the country, and at the end of twenty-four hours the child was brought to the Hospital. The principal rational symptoms were moderate dyspnœa, sublividity, feeble pulse and an anxious expression of countenance. There was occasional cough, but at no time had there been any paroxysm of this, or of suddenly increased difficulty in breathing. On percussion, there was a notable difference in the two sides of the chest, the greater dullness being upon the left side. On auscultation, air was heard entering both lungs with a strong tubular sound, this being the greatest on the left, where it was accompanied by a hoarse, croupy murmur, suggesting the passage of air through a tube narrowed by the presence of a foreign body. These phenomena were obvious to all who examined the child. Tracheotomy, under ether, was then performed, a large opening being made high up, including in the division not only the upper rings of the trachea, but the cricoid cartilage and part, also, of the thyroid cartilage. No foreign body was expelled, nor was any felt on introducing a delicate pair of curved forceps. Inversion, the patient being smartly struck on the back while suspended, accomplished nothing. After the immediate effects of the ether had passed away, the child was in much the same condition as before the operation; but its strength gradually failed, and in spite of stimulants, &c., it died in about five hours, and in thirty hours after the accident.

On opening the chest, the right lung was found collapsed, solidified, and so devoid of air as to sink in water. The left lung was infiltrated with lymph, and so generally inflamed as to crepitate but slightly under pressure. On opening the trachea, a bean was found tightly wedged into the *right* primary bronchus, and it had swollen so much as not only to entirely obstruct, but actually to distend the calibre of the bronchus. Both lungs had therefore become useless—the one from the deposition of lymph, and the other from being deprived by the foreign body of its supply of air.

The rapid development of pneumonia in this case is not only interesting as a pathological fact, but from the error into which it led as to the exact position of the bean. The phenomena of an inflamed lung not being taken into account, its symptoms were confounded with those which might be reasonably ascribed to the foreign body. The tubular respiration was just what might fairly be expected from a partial obstruction of the primary bronchi, and the transmission of this sound, modified in degree and tone, to the opposite side of the chest, where there must have been an absolute absence of respiration, led to the conclusion that the bean was in the bronchus leading to the left lung, while in reality it lay in that going to the right.

Oct. 26th.—*Syphilis communicated by Vaccination.*—Dr. ABBOT said that he had under treatment for syphilitic rupia a little girl, seven years of age, to whom the disease had probably been communicated by vaccination. The child was large and well-developed, and was represented by her mother as having been previously healthy. The parents also were represented as healthy. She had never before shown the slightest trace of cutaneous disease. In May last she was vaccinated with virus from an unknown source, and before the vaccine disease had gone through all its stages, the general cutaneous affection appeared. At the present time the eruption is very full, particularly on the extremities, and presents all the distinctive characters of well-marked

syphilitic rupia. It may be thought that the appearance of an eruption of syphilitic character so soon after its alleged introduction into the system, is an argument against the possibility of its having been so introduced. But it should be remembered that as yet but little is known comparatively of the development of this disease under these peculiar circumstances. It is only within a few years that members of the medical profession have begun to believe it possible that syphilitic infection can be produced in this manner, and it is only within a few months that high authorities on the subject have become convinced of its possibility. It should also be borne in mind that when the disease is communicated by vaccination, the poison is taken from a patient in whom the disease has become constitutional, giving reason for the belief that under such circumstances the virus may not require any lengthened period of incubation preparatory to its showing itself in the well-known secondary forms.

Bibliographical Notices.

Practical Observations on the Prevention and Cure of Puerperal Convulsions. By ROBERT JOHNS, A.B., M.B., &c. Reprinted from the Dublin Quarterly Journal of Medical Science. Dublin: 1863. 8vo. Pp. 51.

THIS pamphlet contains many practical suggestions, and is worthy the attention of those who are much engaged in obstetrical practice. The author enumerates among the causes of *post-partum* inflammation, eleven principal items, viz., previous ill health, defective hygiene, contagion, mental causes, errors in diet, hæmorrhage, and the means used to arrest it, drawing the breasts, exposure to cold, convulsions, uterine disease, inhalation of chloroform. Respecting the latter cause, Mr. Johns remarks, "not the shadow of a doubt exists in my mind that chloroform inhalation during labor strongly predisposes to puerperal inflammation, and that it produces the disease, either directly, by poisoning the blood or otherwise, or indirectly by inducing hæmorrhage or chest affections, already stated to be promoters of the malady. I have known puerperal fever in many cases to have followed upon its administration." It is to be regretted that Mr. Johns has not given us the reports of these cases among the fifty-two observations which are appended to the paper; not one of which relates to the effects of chloroform on parturient women. We cannot help thinking that he is mistaken on this point, or has allowed his prejudices to take the place of facts. Surely *post-partum* inflammations cannot be very common after the use of chloroform during labor, or the fact would become notorious. We have no fondness for the use of chloroform; the less this dangerous agent is used, in our opinion, the better. We have in sulphuric ether, for which it has been substituted, an agent which is equally effectual, and absolutely safe. But we would give the Evil One himself his due. Chloroform kills often enough on the spot, without its being necessary to attribute remote evils to its employment. At any rate, so sweeping an assertion should be substantiated by carefully reported cases.

The author has great faith in the power of mercury to prevent puerperal inflammation, especially in those cases in which proper hygienic measures are impossible. For this purpose he recommends its employment "in a mild way, commencing immediately after, and in some instances before delivery, and continuing its use until the milk has been secreted." Nothing is said as to the indications for the administration of this drug as a prophylactic, and we might infer that Mr. Johns prescribes it in every case of labor, with a view of anticipating possible inflammation.

In the treatment of the disease after it is established, likewise, "mercury is our sheet-anchor, given so as to affect the system." "I think I may with safety assert, that in no case has there been a fatal issue where there were distinct evidences of the system having been affected by it; at least I do not know of a single well-authenticated case." He thinks the combination of bismuth and opium with the mercury adds to its efficacy in controlling its effects on the bowels. He also recommends bloodletting, especially local.

Some remarks on the condition of the pulse in puerperal women are interesting, and we recommend them to the notice of our readers. The pamphlet concludes with a collection of observations designed to illustrate the effect of different causes in producing puerperal inflammation.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 12, 1863.

INTRODUCTORY LECTURE AT THE MASSACHUSETTS MEDICAL COLLEGE.—The winter term of instruction in the Medical Department of Harvard University was opened on Wednesday, 4th inst., with an introductory lecture by Professor Shattuck. The well-filled hall afforded a satisfactory proof that the present instructors have not labored in vain to sustain this branch of alma mater, and the steady increase in the annual number of students, not only from New England, but from Canada and the British Provinces, is a sure indication that their efforts to maintain the highest standard in medical education are widely appreciated. The subject of the lecture was one of great importance, and one which, although hitherto sadly neglected, demands the earnest attention of all who care for the preservation of medicine as a learned profession among us. *Nascitur, non fit*, however applicable to the poet, is not at all so to the physician, although the action of certain large schools in other cities would seem to imply that, if they did not share in the vulgar belief in "natural doctors," they at least cared little for the cultivation of the *art* of medicine in America. It is well known that before the rebellion these schools were in great part sustained by large numbers of young men from the South, many of whom sought the degree of M.D. either for the purpose of gaining that amount of knowledge sufficient for the wants of a plantation, or for an excuse for a subsequent residence in Paris. For these and for others a diploma has always been ready without the ordeal of any thorough examination,

either as to the fitness of the recipient or the time previously passed in study, and by such institutions has the country annually been flooded with parchment degrees in medicine, to the degradation of our profession.

So notorious has this system become, that it early attracted the attention of the American Medical Association, and a committee was appointed to devise some means by which a uniform standard of requirements and instruction might be adopted throughout the country. Thus far the committee has labored to no purpose, for their efforts have not found favor with those whose worldly interests were thus threatened. Among those who have labored long and perseveringly for this praiseworthy object, Prof. Shattuck has throughout taken a chief part, and, as was to be hoped, his address was prompted by his interest in this matter. His subject was the importance of thorough and general preliminary education to the student of medicine, and was forcibly illustrated by sketches from the lives of many of the famous masters in our profession, both in ancient and modern times. The same lesson was to be learned from all: that they had acquired their skill and profound learning only by careful and long-continued mental training under the best teachers of those days. Honors from the State, the friendship of heroes and riches in abundance then followed unsought.

There can be no question that the reason of our failure to occupy the exalted rank among men which in past ages gave the profession the title "divine," is to be sought in ourselves. We have failed to educate ourselves so far above the people, and those who prey upon them in our name, as to make the distinction between true science and the pretensions of the latter class an easy matter, and until some law can be universally enforced which shall regulate the standard of medical education in all parts of our land, such personal appeals to the student as that of Dr. Shattuck cannot be too frequently made or over-estimated.

WE would again call the attention of our readers to the efforts which are being made in this community and elsewhere throughout the Commonwealth to draw the attention of Congress to the subject of a uniform ambulance system for the whole army.

THE undersigned, believing that there is a painful doubt in the mind of some persons whether everything has been done towards providing a proper and uniform ambulance system for all the armies of the Republic, and believing, also, that *some* plan should be digested by order of Congress, and legally established, hereby respectfully recommend to their professional brethren of Massachusetts to aid, so far as they can, in circulating the petition issued by the committee of citizens, a copy of which is annexed.

JAMES JACKSON, Boston.

EBENEZER ALDEN, Randolph.

JEREMY STIMSON, Dedham.

ALFRED HITCHCOCK, Fitchburg.

ELISHA HUNTINGTON, Lowell.

SENECA SARGENT, Lawrence.

CHARLES H. STEDMAN, Boston.

HENRY I. BOWDITCH, "

J. M. WARREN, "

CHAS E. BUCKINGHAM, "

GEORGE H. GAY, Boston.

J. BAXTER UPHAM, "

S. L. ABBOT, "

CALVIN ELLIS, "

JOSEPH SARGENT, Worcester.

FRANK A. CADY, Pittsfield.

THOS. SPARHAWK, Amesbury.

EDW. P. ABBE, New Bedford.

JAMES M. NYE, Lynn.

If every physician throughout the loyal States into whose hands this petition falls, will use it and get signatures among his immediate neighbors, he will perchance do something towards warding off future suffering from our soldiers. Having obtained signatures, let the petition be sent to some Senator or Representative in Congress.

FOR AN AMBULANCE AND HOSPITAL SYSTEM IN THE
ARMIES OF THE REPUBLIC.

To the Honorable Senate and House of Representatives, in Congress assembled:

The undersigned of in the State of respectfully request your honorable body to pass a law providing for a uniform ambulance and Hospital System for the armies of the United States.

NAMES.

RESIDENCE.

THE following extracts relating to the prevalence of yellow fever in New Orleans, are from a letter recently received by Dr. Shattuck from Dr. J. H. Clarke, Asst. Surgeon at the Naval Hospital at that city.

"Most of the admissions lately are cases of yellow fever, which is confined to vessels in the river, but is, I am sorry to say, spreading among them, as new ones come in from sea.

"We have lost nineteen, and have made an autopsy in seventeen of them. After the first series of cases (six) an order was passed to send all cases to Quarantine; but as all, including one officer, so sent, died on their way, or soon after their arrival, the Fleet Surgeon, J. S. Palmer, ordered all cases presenting symptoms of fever to be sent here without delay. As you can understand, we have had enough to do. We have had cases of yellow, intermittent, remittent fever and coryza, sent in compliance with that order. We cannot hope for frost in less than two or three weeks.

"I will make a few statements which may interest you, though I cannot write, nor would you have patience to read, all I hope some time to tell you of this epidemic in the fleet.

"No case has occurred on shore but one, and that in a boiler maker, who worked a week previously on the *Estrella*, from which our most fatal cases come. The disease seems to have *originated* in the river. A prize from Mobile came in recently, after lying thirty days at Quarantine—three fatal cases occurred soon after arriving here. They were men from the *De Soto*, which captured the prize. The mortality is about 60 per cent. At first scarcely any recovered. The cases simulate, when of the mildest type, bad cases of *remittent* fever. The symptoms in the first cases were not well marked. Great epigastric tenderness and marked anxiety are less prominent in this epidemic than usually described. Since its commencement the number of cases of malarial fever has diminished—as if those susceptible to the latter were more susceptible also to yellow fever.

"The pathological appearances are quite constant, and are briefly and roughly as follows:—Decomposition very rapid. Skin—yellow, contrasting strongly with dark spots of mortification, of various shades. Blood—black and fluid. Heart—often without clot—sometimes appreciably soft; microscope showed in five cases (all I examined) more or less complete breaking up of transverse striæ, and in one case even the longitudinal striæ were broken apart and no vestige of transverse

striae were left; the whole had a granular appearance; Prof. Ridell considers this very characteristic. Stomach—inflamed, more or less black or brown fluid, *always flaky*. In several cases no black vomit before death, when the quantity was usually one or two pints. Same matters often more characteristic in the jejunum. Mucous and sub-mucous coat thickened and softened, sometimes of slate-brown color, (cadaveric change chiefly). Liver—*always fatty*; size normal; Bladder nearly empty; contents slightly viscid and very dark. Color of liver olive brown or a little lighter; in only one case was it straw yellow—minute yellow spots, on careful observation. Bladder—usually nearly empty of urine. Kidneys—large, but natural except colored often with yellow tinge. Head—not examined. Other organs not remarkable.

“Albuminous urine, without casts, is a very constant symptom in the second stage.

“I hope you will excuse these desultory remarks; but as you once paid especial attention to this disease, I thought they might be of interest.”

WHAT IS HIS DINNER HOUR?—The following extract from a weekly religious paper is so truthful and suggestive that I beg you to insert it in the *American Medical Times*. It is rare to find a layman who so thoroughly understands the little annoyances to which medical men are subjected.

What question is oftenest asked of any in life? “What’s his dinner hour?” Men may indeed say: “How d’ye do?” But that is a salutation; half the time we do not care whether it is answered or not. This is a question to which we expect an answer: “Is Mr. Blank in?” “No.” “Is Dr. Good at home?” “No.” “What is his dinner hour?”

Now, my friend, what is the motive for asking this question? Do you expect to dine with him? Oh no—you only want to see him. If you wanted an invitation to dinner, you would take a less direct way, but you want to see him. If the servant is green enough, he will tell you his dinner hour; and so when the weary man comes home from his business or his weary round of practice, perhaps hurrying lest he should be late, his dinner on the table, wife and children waiting, there you lie in wait like a spider for your victim. “Just a moment, I only want five minutes’ talk with you.” Who ever finished a talk in five minutes? It grows to ten, he rises, another five, the family have begun their dinner, or sit waiting and indignant. What is a dinner after it has stood on the table fifteen minutes?

“Just one minute more, Doctor.” If a man says one minute, always multiply it by ten. At last he gets rid of you, and he is a saint if he does not follow you with a very left-handed blessing.

“Ah!” you say, “what a stir, merely because a man’s dinner is put off, just once.” Yes, that’s it, “just once.” Why, friend, remember that what you do to-day some one else will do to-morrow, and so it becomes a thing of daily occurrence. It is no small thing to spoil a man’s dinner every day, to trouble his temper; it is really a matter of health and of principle; for when a man has worked hard he needs repose, and digestion is better with a quiet mind.

And what did you want? “Oh, his help about a situation for my

son," or his opinion about a certain investment; or, if he be a physician, a professional opinion. Why not go, then, to his office at the proper time? "Oh, he is so busy then, I always have to wait." So then the whole thing resolves itself into selfishness; you want a favor, and in addition, though you could see him at a time he fixes, you prefer to sacrifice his convenience to your own, and so you ask: "What's his dinner hour?"

"But I expect to pay him." My friend, does money pay for such annoyances, and do you give any extra compensation for loss of temper and much vexation? I never heard of it. "But my time is valuable." It may be; but a man who is really busy, and values his time and is systematic, will appreciate the convenience of others, and not trespass on their rights. Busy! what were you doing the next morning, when he was ready to see you at his office? I saw you lounge for half an hour and smoke a cigar at your leisure. You were not going to have *your* comfort disturbed, and you spent another half hour later, in very unnecessary gossip with Mr. B. at his office: I saw you; but you were in a furious hurry soon after, and all for want of those two half hours.

Oh! for the Law of Consideration. If your business be for his advantage, he has a right to choose his own time or reject it; if you want him to do you a favor, you certainly are bound to consult his convenience. What is the Golden Rule? Answering that, your next question will not be: "What's his dinner hour?"—*Am. Med. Times.*

CASE OF DEATH FOLLOWING THE SUBCUTANEOUS INJECTION OF A NÆVUS.—The following case, communicated to the *London Medical Times and Gazette* by Mr. R. B. Carter, is, we believe, not without a parallel in this vicinity, and deserves the attention of all who make use of perchloride of iron as a subcutaneous injection.

"I am desirous to place on record a case in which the subcutaneous injection of a few drops of a solution of perchloride of iron into a nævus was followed by the immediate death of the patient, an infant 11 weeks old.

"Ellen G., at that time aged 4 weeks, first came under my notice seven weeks ago. She was a well-grown and in other respects healthy infant, but the lower half of her nose was a mass of mixed nævus, which involved the columna and both alæ, and enlarged the feature to at least three times its natural size. The disease was apparent at birth only as a small speck, and was rapidly increasing. Its size admitted of great reduction by pressure, but it refilled as soon as the pressure was removed, and, when the child cried, was in imminent danger of bursting. A scratch from the child's own finger-nail had already produced severe hæmorrhage.

"The hot needle was freely used a day or two after the child's first visit, chloroform having first been administered. Even with this there was much hæmorrhage from some of the punctures, and, the needle having once entered the nostril, there was free bleeding from the mucous membrane. Collodion was applied to the surface, and the treatment seeming to have checked the growth in some degree, the hot needle was used again much more freely than at first.

"The resulting inflammation did not appear to more than stop the growth of the part actually operated upon, and the disease then began

to extend upward so rapidly that in two or three weeks it covered the whole nose. The new portion was chiefly subcutaneous, but the skin covering it presented a few red vessels, and was very thin. At the bridge of the nose the diseased mass was not less than an inch and a half in width. Contractile collodion had been applied regularly, and proved perfectly useless.

"The treatment proper to be adopted seemed a question of some difficulty. The infant had been vaccinated on the arm before I saw it. Pressure and ligatures were alike inapplicable; the actual cautery had failed. Superficial cauterization would have entailed great risk of fatal bleeding on the separation of the eschar. The nutrient arteries were uncertain, and probably numerous. Removal of the growth would have been removal of the whole nose, not to mention the probability of the disease extending backwards. Under these circumstances, deep cauterization seemed to be the only resource.

"The use of caustic pencils pushed into the substance of the growth was contemplated, but decided against on the score of pain; and it was finally determined to inject a solution of perchloride of iron into the mass. This was done, on the 7th of August, without chloroform, to a small portion of the right ala. The pain seemed to be severe, but the effect appeared likely to be useful.

"On the 11th of August, as a preparation for another injection, chloroform was again administered. We did not anticipate any long-continued pain, and therefore did not place the child so fully under the anæsthetic as had been done for the cauterization. The inhaler being removed, a subcutaneous syringe, containing ten minims of the same solution that was used on the former occasion, was introduced through the sound skin of the cheek just outside the margin of the growth, and carried about to the centre of the latter. The effect of the chloroform had partly subsided, and the child cried out at the puncture. The solution had so far acted on the barrel of the syringe as to impede the working of the piston, which stuck fast, and then yielded with a jerk, expelling five minims of the solution. A discolored spot immediately appeared on the part of the nævus over the point of the syringe, and the next moment the child gave one shriek, one short convulsive struggle, and ceased to breathe. My partner, Mr. Gregory, who had seen the case from the first, was fortunately present, and we employed artificial respiration, Faradization, and stimulants, until all hope was over. At the first movement I forced the mouth open and drew the tongue forward, producing a single gasp, and two or three other gasps followed, each more feeble than its predecessor.

"In order to see if any similar accident was recorded, I turned to the various books treating of nævus that were then at hand. They were: Wilson on 'Diseases of the Skin,' Wharton Jones's 'Manual of Ophthalmic Surgery,' Skey's 'Operative Surgery,' Fergusson's 'Practical Surgery,' and Druitt's 'Vade Mecum.' The first four authors all mention the treatment by 'injection of irritant fluids,' among the plans that may be pursued, and give no caution as to any danger attending it. Druitt mentions that the practice has caused death by convulsions, and refers to a case reported in the 21st volume of the *Medical Times and Gazette*. He does not mention the situation of the nævus, nor what fluid was used, and the case appears to be an isolated one. I have not the volume to refer to.

“The result of the present case has been in every way so calamitous, so distressing to the parents, and so painful to the medical attendants, that I hope you will be able to find room for it, as a warning to others how they use what is, I believe, a generally recognized method of treatment.”

AMYGDALOTOMY. By Professor DEROUBAIX.—M. Deroubaix cannot agree with Begin, that this is the simplest operation in surgery, for even with instruments which render it of so much easier performance than heretofore, it still sometimes presents difficulties and danger when certain precautions are neglected. It is of importance to bear in mind that the tonsil is not an exactly defined organ, like a more perfect gland, but has a tendency to become confounded by a kind of transition with the glandular systems of portions of the neighboring mucous membranes. In the normal condition, it makes but a slight projection between the pillars of the velum; but in the case of pathological change, the two tonsils may touch each other—respiration, phonation and deglutition becoming impeded. It is generally in predisposed subjects, as the result of repeated irritation, especially that arising from the action of cold and damp, that an indurated exudation into the follicles, and a sufficiently hypertrophied condition to call for the intervention of surgery, are observed. It is rare, indeed, when the affection has reached this stage, that any local treatment will spare the necessity of an operation; and the author has frequently in vain had recourse to the whole train of remedies, during a prolonged period, without obtaining any diminution in the engorgement or alleviation in the symptoms. It is far better in such cases to employ the appropriate treatment, without teasing the patient by these indifferent measures. In reply to the question whether the removal of the tonsils does not give rise to serious inconvenience, it may be said that to attempt their total ablation would be to risk the perforation of the wall of the pharynx and a lesion of the carotid. In fact, a little more only than the portion which projects beyond the level of the pillars is excised; and this is done without any inconvenience, for all the follicles being independent of each other, the same consequences are not to be feared which would result in the case of a more complicated gland, the different portions of which have mutual relations with each other. Almost always, too, the cure effected is permanent; and it is only in very rare cases that the engorgement is, after some years, reproduced. If, however, by reason of faulty instruments, a mere superficial slice of the tonsil or a portion of its upper or middle part be removed, relapse will follow without much delay. It is highly important to observe, that while at the upper part the pillars of the velum oppose a continual barrier to the tonsils, nothing arrests their development below; so that their chief volume, when enlarged, lies often in this direction. But as this region is not displayed when the mouth is opened and the tongue only moderately depressed, the portion of the tonsil which is then made visible is alone removed; and a part of the diseased tissue below remaining untouched, a relapse is certain to occur. M. Deroubaix rejects the bistoury as not only difficult, but even dangerous in its employment. In fact, he has witnessed a case in which the carotid was fatally perforated. He first contrived an instrument having its plate placed perpendicularly; but finding it difficult to

introduce this low enough in the pharynx to embrace all the diseased tonsil, he so changed the disposition that the plate of the instrument is not perpendicular to the handle but oblique, forming with it an open obtuse angle. This easily embraces the whole of the surface to be removed. The operation can be executed with celerity and certainty. It should never be resorted to during the inflammatory stage; for not only is it then very painful and liable to consecutive accidents, but the tissue of the gland is not firm enough to resist the traction. M. Deroubaix has never met with hæmorrhage after this operation that could not be controlled by a simple vinegar gargle.—*Brit. & For. Med.-Chir. Review*, from *Presse Méd. Belge*, Nos. 31 and 38.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, NOVEMBER 7th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	38	46	84
Ave. mortality of corresponding weeks for ten years, 1853—1863,	33.1	34.7	67.8
Average corrected to increased population	00	00	74.29
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
12	10	0	5	0	0	2	2

ERRATA.—In our issue of Oct. 29th, page 260, 4th line, for “symptoms” read *eruption*; page 261, 9th and 11th lines, for 1853 read 1863.

PAMPHLETS RECEIVED.—Neuroma of the Optic Nerve. By John A. Lidell, M.D.—Introductory Address before Students of Jefferson Medical College, October, 1863. By Prof. S. H. Dickson.—Annual Address before Westchester Co. Med. Society, June 16th, 1863. By J. F. Jenkins, M.D.—Medical Communications of Connecticut Medical Society, Vol. I., No. 4.—Bromine in Hospital Gangrene. By M. Goldsmith, Surg. U.S.V.—Inaugural Address of L. J. Sanford, M.D., Prof. of Anatomy and Physiology, Yale College.—Address before Albany Medical College. By R. W. Chirk, D.D.—Annual Report of N. E. Female Medical College.—Hospital Construction. By C. A. Lee, M.D.

JOURNALS RECEIVED.—London Lancet, Sept. 5th, 12th, 19th, 26th, Oct. 3d, 10th, 17th and 24th, 1863.—American Med. Times, vol. vii., Nos. 14—19.—Journal de Médecine de Bordeaux, Sept. and Oct., 1863.—Sanitary Reporter, vol. i., Nos. 10, 11, 12.—Chicago Med. Journal, October, 1863.—Dental Register of the West, Sept., 1863.—Buffalo Medical and Surg. Journal, Oct., 1863.—Medical News and Library, Oct. and Nov., 1863.—Cincinnati Lancet and Observer, Oct., 1863.—Med. and Surg. Reporter, vol. x., Nos. 22—26.—Dental Cosmos, Sept., Oct. and Nov.—Pacific Med. and Surg. Journal, Sept., 1863.—Canada Lancet, vol. i., No. 8.—American Journal of Med. Sciences, Oct., 1863.—Homœopathic Review, Sept. and Oct., 1863.—Ohio Med. and Surg. Journal, Sept., 1863.—Hall's Journal of Health, Nov., 1863.—Union Monthly, vol. i., No. 2.—Eclectic Med. Journal, Oct. and Nov., 1863.—New York Dental Journal, Sept., 1863.—Chemist and Druggist, Oct., 1863.—Sanitary Commission Bulletin, vol. i., No. 1.—San Francisco Med. Press, Oct., 1863.—American Druggists' Circular, November, 1863.

DIED.—In South Danvers, Nov. 3d, D. C. Perkins, M.D., 33 years 11 months 23 days.—In Hartford, Conn., Oct. 29th, Lucius Abbott, M.D., aged 60 years.

DEATHS IN BOSTON for the week ending Saturday noon, Nov. 7th, 84. Males, 38—Females, 46.—Accident, 2—amputation of foot, 1—inflammation of the bowels, 3—congestion of the brain, 1—disease of the brain, 2—bronchitis, 3—cholera infantum, 2—cholera morbus, 2—consumption, 12—convulsions, 2—croup, 10—cynanche trachealis, 1—diabetes, 1—diarrhoea, 4—diphtheria, 2—dropsy, 3—dropsy of the brain, 1—typhoid fever, 2—hæmorrhage (uterine), 1—disease of the heart, 1—intemperance, 1—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 2—old age, 2—pleurisy, 1—premature birth, 3—puerperal disease, 3—scurvy, 1—disease of the spine, 1—suicide, 1—syphilis, 1—unknown, 4.

Under 5 years of age, 37—between 5 and 20 years, 4—between 20 and 40 years, 22—between 40 and 60 years, 14—above 60 years, 7. Born in the United States, 54—Ireland, 21—other places, 9.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXIX. THURSDAY, NOVEMBER 19, 1863.

No. 16.

CASE OF FRACTURE OF THE THIGH TREATED BY IMMOVABLE APPARATUS OF GYPSUM.

[Read before the Suffolk District Medical Society, Oct. 31st, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY JOHN GREEN, ONE OF THE ATTENDING PHYSICIANS AT THE CENTRAL OFFICE OF
THE BOSTON DISPENSARY.

ELISE H., a healthy German child, about two years old, broke the left thigh, about its middle, by a fall out of bed, Sept. 8th, 1863. The limb was shortened about an inch and a half, but was easily restored to the length of its fellow by gentle traction. I immediately applied a starched bandage from the foot as high as the groin, supporting it on the sides by strips of stout pasteboard previously softened by soaking in water. A farther temporary support was given to the apparatus by splints of dry pasteboard, which were allowed to remain until the starch had become dry. For two or three days no shortening was to be detected, but on the fifth day I found that the starch had become softened from dampness, and that the limb was three quarters of an inch shorter than the other. I then slit up the bandage along the front of the thigh and covered it with another roller, applied pretty firmly, while extension was made by an assistant. The whole limb was then covered with plaster mixed with water to the consistence of cream, a second roller was applied over it, and the whole surface smoothed over with a little more plaster and varnished with a solution of shellac in alcohol. The child lay on the back, and any tendency to rotation was checked by blocking the limb on the sides with small sticks of fire-wood. At the end of the third week the apparatus was removed for inspection of the limb, and was renewed as before. At the end of five weeks, the bandage was finally taken off, and the treatment ended; there was no twisting or other distortion, and the shortening was scarcely to be detected, certainly not exceeding one eighth of an inch.

[Nov. 3d, eight weeks from the date of the fracture, the child walks as easily and as well as before the injury.]

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This case is interesting as illustrating the treatment of fractures of the thigh in young children, and under circumstances unfavorable to the perfect rest demanded by many of the forms of apparatus in common use. The child lay on a mattress upon the floor, and had to be moved several times a day in order to change the bedding under her. This was easily effected by means of a belt placed about the waist, at the same time supporting the broken limb in its plaster case with the other hand. The tendency to shortening was resisted by the conical form of the thigh and of the socket formed by the plaster, just as, after amputation of the thigh, the weight of the body is sustained in the conical socket of a modern artificial limb. To secure this condition, the upper part of the apparatus must be firmly applied to the thigh, and carefully watched to detect any loosening which may occur from the shrinking of the soft parts. Should shortening occur from this cause, the thigh part of the apparatus should be slit up in front, a wedge-shaped strip removed, and the whole re-adjusted by applying a starched roller over it, at the same time that extension is made by an assistant. Another powerful agency, as it seems to me, in preventing the shortening of the limb, is the circular compression of the muscles of the thigh. Of the potency of this action I am convinced from observing its great efficiency after amputation of the thigh in relieving the tension of the soft parts over the end of the bone, and thus preventing its protrusion and the formation of a conical or sugar-loaf stump.

The application of these two principles seems to have been long ago attempted, but with no great success. The most ingenious of these methods is that of Benjamin Gooch, whose apparatus, wrongly attributed to Benjamin Bell, is figured in John Bell's "*Principles of Surgery*." Gooch compressed the muscles of the thigh by means of a large number of thin splints, of an inch or less in width, glued upon thin leather and confined by three or more circular straps and tourniquets. Counter-extension was made from an adjustable ring of metal encircling the upper part of the thigh, but not bearing against the perinæum; this ring was connected by iron rods with a pair of bands placed just above and just below the knee, and the extension effected by means of screws. In this machine, as in the ancient "*glossocomon*," the great and fatal defect was the painful constriction of the limb by rigid bands at a few isolated points, causing the whole member to swell, and thus compelling the speedy relaxation of the extending force for fear of inducing gangrene. In the method now proposed, this danger is avoided by including the whole leg and foot in the plaster apparatus; the plaster case forms an efficient splint, and both the extension and counter-extension are made from large surfaces accurately moulded to the parts, thus acting efficiently and without the confinement and irritation which attend the use of the long side-splint and perineal band. The im-

portant feature in this method, and that in which it differs from the ordinary treatment by the starched or plaster bandage, consists in tightening or renewing the thigh part of the apparatus as often as the shrinkage of the soft parts permits shortening to take place. This, as has already been stated, may be easily effected by cutting out a narrow strip from the front of the case, and tightening it by means of a roller, or better perhaps, in the manner of Mr. Gooch, by straps and twisted tourniquets. The skin, at the part of the thigh corresponding to the slit in the apparatus, may need to be protected by a strip of thin pasteboard, and the plaster may be strengthened, on the outside, to any requisite extent by thin splints of wood or metal. Dextrine may be used instead of plaster, with the advantage of greater neatness with less weight, but plaster has the very great recommendation that it hardens more promptly, is less affected by being wet, and, if varnished, can easily be kept clean, even under the most unfavorable circumstances.

For fractures below the upper third of the femur, I think this method may be made to render good service, at any rate in young children. I should be disposed to try it, also, in the adult, with the addition, perhaps, during a part of the time, of a weight hung to the foot, as practised by Hildanus, and now again somewhat in fashion in this neighborhood.

909 *Washington St., Boston, October 31st, 1863.*

CANCER OF THE PYLORUS.

[Read before the Suffolk District Medical Society, Oct. 31st, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY JOHN HART, M.D., BOSTON.

P. E., age 52, mechanic. Came from Germany about fifteen years ago. Had pneumonia before he came to this country, but enjoyed good health until eight years ago, when he went to the West and there was taken with intermittent fever, which left him again after having returned to Boston. After this his health was apparently good, with the exception of slight dyspepsia and diarrhœa. His habits were regular; would drink beer, but never to any excess; wine never agreed with him, but could drink cider or brandy. He was in the habit of using tobacco to great excess; a pound would last him from ten to fourteen days; he chewed mostly, and swallowed the saliva. He worked in a factory, where he was mostly engaged in lifting and carrying heavy boxes. Was able to work regularly until within a year, when his disease seems to have commenced. He never complained of pain in the stomach, but always experienced a great deal of pressure and weight after meals, particularly after having taken meat, which he usually had to vomit again some hours after eating. Lived mostly on farinaceous diet, sweet or sour

milk and buttermilk. Besides the pressure, he suffered from the accumulation of gases, which caused almost continual eructations. Pyrosis was also at times so excessive that he would have to keep a vessel before him for the reception of the fluid which would flow from his mouth. The bowels were obstinately costive; no defecation except by the use of medicines; the fæces were very hard and small. He vomited frequently, but not at regular times after meals; sometimes not for several days, and mostly after having taken meat. His thirst was excessive all the time; drank mostly beer and cider, and milk at his meals, but no tea nor coffee. During this time he emaciated greatly, and was obliged to give up work two or three days during the week.

I first saw the patient Aug. 7th. He then had the appearance of having suffered very much; his skin was sallow, he was very much emaciated, and so feeble that he was hardly able to walk. He complained principally of dyspepsia, distension of the stomach, constipation, eructations of wind and pyrosis. Generally, after two or three days, his stomach would feel very much distended, when he would vomit a very large amount, consisting mostly of water and mucus, which would produce great relief. I ordered milk diet, tonics and laxatives, and the omission of tobacco. The laxative pills gave him some relief, as they slightly moved the bowels, but the tonic tinctures did not agree with him. After this I changed to tonic infusions, with alkaline carbonates. But there was no benefit derived from them, and as I found my directions in regard to diet and the use of tobacco were not observed, I advised him to go to the hospital. He entered the 20th of August and remained till the 30th.

He came under my care again Sept. 7th, with the previous symptoms, but complained also of a burning heat in the region of the stomach and along the œsophagus. He suffered extremely from dyspepsia; the water would almost continually run from his mouth; there were continual eructations, and any kind of food, and even the smallest quantities, would distress him so much that I resorted to beef-tea injections. To move his bowels I ordered Pullnaer mineral water, from which he had at first several defecations, but after this it was of no benefit.

Several days after this he vomited a fluid having the color of coffee-grounds, and which amounted to as much as a gallon or more. Twice after this he vomited smaller quantities, and the fæces were also mixed with it. After this he apparently improved; his appetite was better, had a defecation almost every day, and soon felt so much better that he could take a very small piece of steak without causing any distress. I endeavored to confine him to milk diet exclusively, but could not succeed. He utterly refused to take sweet milk; buttermilk and cider he drank freely, without causing much distress. The improvement continued but a few days, when he be-

gan to lose his appetite entirely, and emaciated more rapidly than ever. The bowels remained regular, vomiting and pyrosis ceased, as well as the burning sensation about the stomach and œsophagus, but the eructations continued. He had such a disgust for food that he said he would rather die than take any nourishment. He complained at this time of a sinking of his heart, and requested me frequently to order some medicine to strengthen it. The pulse was now very feeble, there was œdema about both ankles and the extremities were very cold. I administered small doses of morphia, which almost instantly relieved the distressing feeling about the heart and stomach.

On percussion, he experienced intense pain just below the sternum, but could not find any dulness about the natural region of the heart. He expired Oct. 3d. His death was very easy, and he remained conscious to the very last.

Dr. Ellis was so kind as to perform the autopsy, of which he gives the following result.

The position of the stomach was changed, the pylorus lying in the median line, about two inches above the umbilicus, fully exposed. The arch of the colon two inches below the umbilicus. The stomach contained thirty cherry-stones and four German prune-stones. Had eaten no cherries for a long time, but had been eating prunes about two or three weeks before his death. On the pylorus, and for a short distance within it, was an elevated irregular growth, deeply ulcerated. The passage was extremely narrow. A superficial microscopic examination showed nothing remarkable, but the portion examined was so far disorganized that structural peculiarities could not be appreciated. The muscular coat of the pyloric portion of the stomach was hypertrophied. Some white opacity of the external membrane of the heart; the heart itself small and shrivelled. Other organs normal.

ON THE PHYSIOLOGICAL PROPERTIES OF NITRO-BENZOLE AND ANILINE.

BY HENRY LETHEBY, M.B., F.L.S., &c.

It is on record that Thrasyas, the father of botany, was so skilled in the preparation of drugs that he knew how to compound a poison which would remain for days in the living body without manifesting its action, and would at last kill by a lingering illness. Theophrastus speaks of this poison, and says its force could be so modified as to occasion death in two, three, or six months, or even at the end of a year or two years. The writings of Plutarch, Tacitus, Quintilian and Livy are full of instances of what seem to be this kind of slow and occult poisoning. In fact, until recently there has been a common belief among the unlearned that a skillful poi-

soner could so apportion the dose and combinations of certain subtle agents that he could destroy the life of his victim with certainty, and at the same time measure his allotted moments with the nicest precision, and defy the utmost skill of the physician and the chemist. Even so late as the sixteenth century this belief was shared by the learned of the profession; for we are told, in Sprat's "History of the Royal Society," that among other questions which were drawn up by the earlier Fellows to be submitted to the Chinese and Indians was, "Whether the Indians can so prepare that stupefying herb, *Datura*, that they make it lie several days, months, years, according as they will have it, in a man's body without doing him any hurt, and at the end kill him without missing half an hour's time?"

Modern toxicologists have long since discarded these notions, and have set them down to the vague fears and exaggerated fancies of the ancients, rather than to the sober contemplation of facts. But the account which I am about to give of the physiological properties of nitro-benzole will show that there is one substance, at least, which realizes to a great extent the extraordinary opinions of the ancients. This compound may be given to-day, and yet, if the dose be not too large, it shall not manifest its action until to-morrow or the day after, and then shall destroy life by a lingering illness, which shall not only defy the skill of the physician, but shall also baffle the researches of the medical jurist. These facts are so remarkable that they would be hardly credited if they were not susceptible of the proof of demonstration. They are likewise the more interesting and important from the circumstance that nitro-benzole is now a common article of commerce, and is accessible to every one.

In every manufactory where nitro-benzole and aniline are prepared on a large scale, the peculiar narcotic effects of these poisons are often observed. The vapors escaping into the atmosphere are breathed by the workmen, and cause distressing headache and a heavy, sleepy sensation. For the most part these effects are not serious, but are quickly relieved by fresh air and a mild stimulant, as a glass of brandy and water. Now and then, however, the workmen, from carelessness in their habits, expose themselves to the action of comparatively large quantities of these poisons, and then the effects are most dangerous. Two fatal cases of poisoning by nitro-benzole have been referred to me by the coroner for investigation during the last two years, and in both instances they were the results of careless manipulation. In one case, a man, 43 years of age, spilt a quantity of the liquid over the front of his clothes, and he went about for several hours in an atmosphere saturated with the poison. In the other, a boy, aged 17 years, received a little of the liquid into his mouth while sucking at a siphon. The effects were nearly the same in both cases, notwithstanding that in

one the poison was inhaled, and in the other it was swallowed. For some time there was no feeling of discomfort above that of drowsiness; gradually, however, the face became flushed, the expression stupid, and the gait unsteady—the sufferers had the appearance of persons who had been drinking. Little by little this stupor increased, until it passed into profound coma, and in this condition they died. The progress of each case was much the same as that of slow intoxication, excepting that the mind was perfectly clear until the coming on of the fatal coma. This was sudden, like a fit of apoplexy; and from that moment there was no return of consciousness or of bodily power—the sufferer lay as if in a deep sleep, and died without a struggle. The duration of each case was nearly the same; about four hours elapsed from the time of taking or inhaling the poison to the setting in of the coma, and the coma lasted for about five hours.

After death there were no appearances of convulsions, but rather of narcotism and apoplexy. The face was flushed; the lips were livid; the superficial vessels of the body, especially about the throat and arms, were gorged with blood; the dependent parts were turgid; the blood was everywhere black and fluid; the lungs were somewhat congested; the cavities of the heart were full; the liver was of a purple color, and the gall-bladder distended with bile; the brain and its membranes were turgid, and in the case of the man there was much bloody serosity in the ventricles. Analysis discovered the existence of nitro-benzole in the brain and stomach, and also of aniline.

These effects were so remarkable, that I determined to examine them still further by experiments on domestic animals. Dogs and cats were submitted to the action of from thirty to sixty drops of nitro-benzole which had been well washed with dilute sulphuric acid and water to free it from every trace of aniline. The poison was generally administered by pouring it into the mouths of the animals, but sometimes it was given by means of an œsophagus-tube. When the nitro-benzole had come into contact with the mouth, it always caused discomfort, as if from unpleasant taste, and there was profuse salivation. Its local action on the stomach, however, was never very great, for there was rarely any vomiting until the setting in of nervous symptoms, and this seemed to be due to sympathy rather than to any local irritation of the stomach. Two classes of effects were clearly observed; there was either the rapid coma which characterized the operation of the poison on the human subject, or there was a slow setting in of paralysis and coma, after a long period of inaction.

When the effects were speedily fatal, the animal was soon seized with giddiness and an inability to walk. The weakness of the limbs first appeared in the hind extremities, and was manifested by a difficulty in standing; but very soon it extended to the fore legs, and

then to the head and neck. There was complete loss of voluntary power. The animal lay upon its side, with its head drawn a little back, and with its limbs in constant motion, as if in the act of walking or running. The muscles of the back were occasionally fixed in spasm, and every now and then the animal would have a sort of epileptic fit. It would look distressed, would howl as if in pain, and would struggle violently. After this it would seem exhausted, and would lie powerless. The pupils were widely dilated, the heart's action was tumultuous and irregular, and the breathing was somewhat difficult. For some time, however, the animal retained its consciousness, for it would look up, and wag its tail when spoken to; but suddenly, and often at the close of a fit, it would become comatose—the eye would remain open, but the conjunctiva would be insensible to touch, and the movements of the limbs would nearly cease; the breathing would be slow and somewhat stertorous, and the animal would appear as if it were in a deep sleep. This condition would last until it died—the time of death varying from twenty-five minutes to twelve hours after the administration of the poison.

When the action of the poison was slower, there was often no visible effect for hours or days. At first there was always a little discomfort from the taste of the poison, but this soon subsided, and then for a day or more the animal appeared to be in perfect health. It would go about as usual, would be quite lively in its movements, would eat its food heartily, and in fact would seem to be in no way affected by the poison. Suddenly, however, it would look distressed, it would have an attack of vomiting, and it would tumble over in an epileptic fit. When this had subsided, it was generally found that the animal was weak, or even quite paralyzed in its hind extremities; and after two or three of such attacks, the loss of voluntary power would extend to the fore limbs. The animal would lie upon its side perfectly helpless, and then the progress of the case was much the same as that already described, except that it was considerably slower. Consciousness, for example, would be retained for several days after the animal was paralyzed, and, although it was quite unable to stand, it would take food and drink when they were put into its mouth. The condition in which it lay was most distressing; the look was anxious and full of fear; the limbs were in constant motion; and every now and then there would be a violent struggle, as if the animal was in a fit, or was making fruitless efforts to rise. This would last for days, and then there would be either a gradual restoration of voluntary power, with complete recovery, or death from exhaustion. The time that elapsed from the administration of the poison to the coming on of the first symptoms, namely, the epileptic fit, varied from nineteen hours to seventy-two; in most cases it was about two days, and the time of death was from four to nine days.

The *post-mortem* appearances were nearly the same in all cases,

whether the death was quick or slow. The vessels of the brain and its membranes were extremely turgid; the cavities of the heart were full of blood; the lungs were but slightly congested; the liver was of a deep purple tint, and the gall-bladder distended with bile; the stomach was natural, without sign of local irritation; and the blood all over the body was black and uncoagulated. Whenever the progress of the case had been quick, and death had taken place within twenty-four hours, the odor of the nitro-benzole was clearly perceptible in the stomach, the brain and the lungs; and there was always unmistakable evidence of the existence of aniline in the organs of the body. In the slower cases, the odor of the poison had often entirely disappeared; but generally there were distinct traces of aniline in the brain and urine, and sometimes in the stomach and liver; occasionally, however, no poison was found.

It has appeared to me that the facts which are here elucidated are very remarkable; for they not only indicate a rare circumstance in toxicology, namely, that a poison may be retained in the system for many days without showing its effects, but also that the poison may be changed into an entirely different substance. The importance of these facts cannot be over-rated; they are alike interesting to the chemist, the physiologist, and the medical jurist; for without dwelling on a very possible occurrence—namely, the criminal administration of this poison, with the knowledge that the effects would be delayed, that the symptoms would correspond to those of natural disease, that the progress of the case would be lingering, and that there would be either no discovery of poison in the body, or the discovery of a thing different from that administered—it will be manifest that the study of these facts by the medical jurist is of public importance. To the physiologist they are also interesting, inasmuch as they indicate a reducing power in the animal body by the conversion of nitro-benzole into aniline. I have endeavored to ascertain whether this is due to a living or a dead process. In the first place, I find that dead and decomposed organic matter will effect the change alluded to; for when nitro-benzole is placed in the dead stomach, or is kept in contact with putrid flesh for several hours, there is a partial reduction of it into aniline. This may be the source of the poison found in the dead body; but, on the other hand, there is a great similarity in the physiological effects of nitro-benzole and those of aniline.

When aniline is given to dogs and cats in doses of from twenty to sixty drops, it causes rapid loss of voluntary power. The animal staggers in its gait, looks perplexed, and falls upon its side powerless. Its head is drawn back, the pupils are widely dilated, there are slight twitchings or spasms of the muscles, the breathing is difficult, the action of the heart tumultuous, and the animal quickly passes into a state of coma. From this it never recovers, but remains upon its side as if in a deep sleep, and so dies in from half an hour to thirty-two hours.

The *post-mortem* appearances are much the same as the last: the brain and its membranes are turgid, the cavities of the heart are nearly full of blood, the lungs are but slightly congested, and the blood all over the body is black and uncoagulated. In every case the poison was easily discovered in the brain, the stomach and the liver.

While, however, there seems to be a probable conversion of nitro-benzole into aniline in the living animal body by a process of reduction, there is also undoubtedly a change of an opposite character going on upon the surface of the body, whereby the salts of aniline are oxidized and converted into *mauve* or *magenta* purple. Some remarkable facts illustrative of this have been brought under my own notice, and have been the subject of clinical observation.

In the month of June, 1861, a boy, aged 16, was brought into the London Hospital in a semi-comatose condition. He had been scrubbing out the inside of an aniline vat, and while so doing he breathed an atmosphere charged with the vapor of the alkali, and became insensible. He did not suffer pain or discomfort, but was suddenly seized with giddiness and insensibility. When he was brought to the hospital he looked like a person in the last stage of intoxication; the face and surface of the body were cold, the pulse was slow and almost imperceptible, the action of the heart was feeble, and the breathing was heavy and laborious. After rallying a little, he complained of pain in the head and giddiness. It was then noticed that the face had a purple hue, and that the lips and lining membrane of the mouth and nails had the same purple tint. The next day, although the narcotic effects of the poison had passed away, he was still remarkably blue, like a patient in the last stage of cholera.

In the early part of last year, sulphate of aniline was given in rather large doses to patients in the London Hospital affected with chorea. The doses ranged from a quarter of a grain to seven grains. They were frequently administered, so that large quantities of the salt were taken in a very short time. In one case as much as 406 grains were taken in the course of a few days. No very remarkable effects followed beyond this, but after a few doses had been taken, and the system had become, as it were, saturated with the salt, the face became of a leaden-blue color, the lips and gums looked as if the patients had been eating black currants, and the nails also acquired a purple hue. The color faded a little before the time came for the administration of another dose, but soon after taking it, it appeared again; and this was the subject of constant observation. Dr. Fraser and Dr. Davies have recorded the results of their experience in five cases,* from which it would seem that although the free alkali is a powerful poison, the sulphate of it has but little action upon the animal body.

* Medical Times and Gazette, March 8, 1862, p. 339.

The general conclusions which appear to me to be warranted by these investigations are:—

1st. That nitro-benzole and aniline in its free state are powerful narcotic poisons.

2d. That they exert but little action, as local irritants, on the stomach and bowels.

3d. That although the effects may be quick, and the fatal termination of them rapid, yet nitro-benzole may remain in the system a long time without manifesting its action.

4th. That the salts of aniline are not nearly so poisonous as the free alkali.

5th. That in rapid cases of fatal poisoning, both the poisons are readily discovered in the dead body.

6th. That in slow cases the poison may be entirely changed or eliminated, and therefore not recognizable.

7th. That both of the poisons appear to be changed in the body by processes of oxidation and reduction, nitro-benzole being changed into aniline, and aniline and its salts into mauve or magenta.

In an appendix* are given notes of the two cases of fatal poisoning by nitro-benzole referred to in the paper, and a detailed account of twelve experiments on animals with nitro-benzole, and three with aniline; also the process employed for the recognition of aniline and nitro-benzole in the dead body, as follows:—

1st. The matters to be analyzed were bruised in a mortar with a little water, and very slightly acidulated with dilute sulphuric acid.

2d. They were then submitted to distillation in a glass retort—the distilled products being saved in three or four separate portions by changing the receiver at different stages of the process. In this way the presence of nitro-benzole was discovered.

3d. The residue in the retort, when reduced to a pulpy mass by the distillation, was treated with strong spirit of wine and filtered.

4th. The filtered alcohol solution which contained the aniline was treated with a slight excess of subacetate of lead, and again filtered. In this way gum, dextrine, &c., were removed.

5th. The filtered solution was treated with a slight excess of a saturated solution of sulphate of soda in water. In this manner the excess of lead was precipitated as a sulphate.

6th. The clear solution was then made very alkaline with caustic potash, and distilled to dryness from an oil-bath. The aniline, together with ammonia from the animal matters, was found in the clear, colorless, distilled spirit.

7th. This was neutralized, or rather made acid, with a slight excess of dilute sulphuric acid, and evaporated nearly to dryness in a white porcelain dish. If necessary, the spirit was saved by distillation.

* Preserved in the Archives.

8th. The residue was of a pinkish color if aniline was present, and occasionally there were little streaks of blue around the edges of the white porcelain dish. If the quantity of the saline residue was not more than a grain or so, it was at once tested by dissolving it in a few drops, or even in a single drop, of dilute sulphuric acid (1 to 1). A small portion of it was then placed upon a strip of bright platinum; and the platinum having been connected with the positive pole of a single cell of Grove's battery, the liquid was touched with the negative pole: in a few seconds, if aniline was present, the liquid would acquire a bronze, a blue, or a pink color; the kind of color being dependent on the amount of aniline present—bronze being the result of much aniline, and pink of a very little. In this way at least one two-thousandth part of a grain of aniline was easily recognized.

To another portion of the acid liquid placed upon a white porcelain plate, a little peroxide of lead or red prussiate of potash was added, and a blue or purple reaction followed. This test is not so delicate as the last, for it fails when the amount of aniline is less than the one-thousandth of a grain.

Other tests may be resorted to if necessary, as when the quantity of aniline is large. Thus peroxide of manganese or bichromate of potash may be used in the same way as the red prussiate of potash in the last experiment; but these tests will not answer with less than the one five-hundredth part of a grain of aniline. Lastly, a drop of a solution of chloride of lime may be added to the acid liquid, and if the quantity of aniline exceeds the hundredth part of a grain it will cause a purple reaction.

9th. If the quantity of saline residue from the last operation is large, and there is reason to believe that much ammonia is present, this alkali must be got rid of, for it greatly interferes with the success of the color-experiments. The residue, therefore, is made moist with water, and rubbed down with about twice its bulk of neutral carbonate of soda. It is then exposed to the air for a short time until the color of the ammonia has passed away. It is then treated with strong alcohol, filtered, acidulated with dilute sulphuric acid, and again evaporated. The aniline is now fit for the color-experiments.

There are no fallacies to these experiments; for, although, as I have elsewhere shown, strychnia will give nearly the same color-reactions, yet in the first place this alkali is not volatile like aniline, and will not, therefore, distil over as the latter does; and in the next place, while the best effects, in respect of color, are developed with dilute acid and aniline, strychnia requires the concentrated acid. These differences are sufficient to prevent any embarrassment as regards the two alkaloids.—*Lond. Pharm. Journal*, Sept., 1863.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL
IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

OCT. 26th.—*Softening and Fatty Degeneration of the Heart; sudden Death.* Dr. ELLIS showed the specimen.

The patient, 45 years of age, was subject to gout and rheumatism. For four years or more he had been liable to dyspnœa, palpitation, pain in the cardiac region, and occasionally down the arms. During the last four months of his life these attacks became more severe. While walking with a friend, he would often stop and complain of pain, dyspnœa and irregular action of the heart.

While seated at the tea-table, on June 15th, after eating very moderately, he complained of feeling unwell, and retired to a neighboring room, where a member of the family found him shortly after, in great distress. According to one statement, there was some frothing at the mouth and a convulsion, but nothing of the kind was noticed by Dr. Morrill Wyman, who soon arrived. At that time, 10, P.M., the patient was pulseless, with cold hands and feet. The forehead was bathed in perspiration. The countenance was pale, the mind clear. Complaint was made of a feeling of oppression at the upper part of the sternum, and of dyspnœa. The respiration was "groaning and sighing." No pulse could be felt in the groin, nor was any pulsation of the heart perceived by the hand or ear. Though able to swallow brandy and ammonia, he did not revive, and died suddenly at 1¼, A.M.

Autopsy, 16 hours after death. The adipose tissue was abundant. The heart was flaccid, and filled with liquid and much recently coagulated blood. The substance was of a pale-red color, and more friable than usual, breaking down easily under pressure and traction. In some portions, particularly at the upper part of the anterior wall of the right ventricle, the adipose tissue had apparently encroached upon the muscular. Some isolated points of adipose tissue were also seen. Quite a limited portion was white, shining and fibrous.

On microscopic examination, many of the transverse striæ were found indistinct or invisible, and some of the fibres contained minute globules. Free fat and minute portions of adipose tissue were also seen. The stomach contained some ingesta. The other organs were normal.

OCT. 26th.—*Fatty Degeneration and Rupture of the Heart.*—Dr. ELLIS showed a heart which he had removed from a patient of Dr. GAY, an old gentleman, who fell in the street, and died a few hours after being carried home.

The adipose tissue was everywhere abundant. The pericardium was filled with a recent blackish coagulum. The heart was flaccid, of a light-red color, soft and easily torn. The external adipose layer had not only encroached upon the muscular substance, but points of the same were seen imbedded in the latter. The substitution of fat for muscle was most marked at the upper part of the anterior wall of the right ventricle.

Just beneath the anterior fold of the mitral valve was a perforation, as large as a goose quill externally, but much larger internally, where the rough appearance of the tissue indicated recent rupture.

On microscopic examination, many of the fibres were pale, indistinct and homogeneous, owing to the great obscurity or disappearance of the transverse striæ. In some, minute globules were seen. Other portions contained well-marked adipose tissue. The aorta was examined as far down as the iliacs. Its inner surface was everywhere roughened by atheromatous deposits, cretaceous plates, or superficial excavations resulting from the destruction of the former. The cortical substance of the kidneys was thin and granular. The other organs were sufficiently healthy.

Portions of the hearts in this case and the preceding were examined by Dr. Jeffries Wyman, without a knowledge of the disease suspected, and he arrived at the same general results. There can, therefore, be no reasonable doubt that death was directly caused by the change in the muscular tissue.

Dr. MINOT said that he had shown a specimen of rupture of the heart to the Society more than two years ago. The patient was a woman, 76 years old, who, while conversing with a friend, fell, and died immediately. A year previously she had an attack of hemiplegia, with loss of speech, from which she had nearly recovered. At the autopsy, about eight ounces of blood were found in the pericardium, which came from a small rent in the left ventricle, near the interventricular septum. Dr. Ellis had examined the specimen microscopically, and had found the parts near the rupture to be the seat of fatty deposit.

OCT. 26th.—*Malignant Disease of the Testicle.* Dr. CLARK showed the specimen, which he had removed from a man, 31 years old, a machinist by trade, who had received a blow on the part a year ago, from the corner of a falling iron casting. He had severe pain in the testicle for half an hour after the accident, but for the six months following felt no uneasiness in the part. Six months ago, however, the patient noticed an enlargement of the right testicle, with pain, and these symptoms increased until he entered the Hospital, when the testicle was enlarged to the size of a large orange, was hard and unyielding. The scrotum was covered with a network of engorged veins. The disease proved, on examination, to be unquestionably malignant.

Dr. ELLIS said he had examined, microscopically, a portion of the tumor, consisting of a soft, dull-white material, containing much milky fluid, and irregular, yellow lines or masses. The first contained variously-shaped cells, with large nuclei and nucleoli, such as are most frequently found in malignant growths. Many of the nuclei contained several irregular nucleoli. In the yellow portions, fatty degeneration had taken place.

Dr. CLARK remarked that the case was interesting as one of apparent development of malignant disease from injury.

Dr. JACKSON had seen some striking instances of this. He once examined the body of a sailor who entered the Chelsea Marine Hospital, under Dr. Stedman's care, with cancerous disease of the testicle, which appeared two months after he had received a blow on the part. The man had been perfectly healthy previously, and yet at the autopsy cancer was found in almost every part of the body.

OCT. 26th.—*Tumor from the Roof of the Mouth.*—Dr. CABOT showed a small round tumor, which he had removed from the roof of the mouth of a soldier. It had existed for eighteen months. It was situated on the posterior and left part of the hard palate, extending as far as, but not

involving the gum. Although the patient had suffered severe pain in the left side of the face and temple, of a neuralgic character, yet he was not sure that it had its origin in the tumor. It was somewhat tender on pressure, but not painful. The capsule which contained it being incised, it was easily shelled out. It was two thirds of an inch in diameter, of a yellowish-white color, and mostly smooth, but in one part it had a warty appearance.

Dr. ELLIS said that no lobules smaller than those seen by the naked eye were noticed by him under the microscope. It was composed of delicate fibroid tissue and cells of moderate size, round, fusiform and variously elongated, with distinct nuclei and nucleoli, not remarkable for their size. There were also free nuclei. The gross appearances were benign, but the microscopic appearances were suspicious.

Nov. 9th.—Dr. ELLIS read a communication from Dr. John Homans, Jr., U.S.A., Surgeon of St. James's Hospital, New Orleans, containing an account of the following cases:—

I. *Fibrinous Cast from the Urethra*.—The patient, a private in the Massachusetts Battery, entered the Hospital Feb. 20th, in an excited and anxious state of mind, on account of a long mass of lymph which was protruding from his urethra. He had had a discharge from the part three weeks after connection with a prostitute, for which he used an injection of two grains of chloride of zinc to an ounce of water. This caused considerable, but not severe pain, and he had continued it for five days, when the mass suddenly began to protrude from the meatus. By gentle traction seven and a half inches of a cast of the urethra were drawn out, when it broke off. It was of a greyish color, and completely tubular. On being cut open, it was lined with a distinct, smooth and shining membrane, which was in longitudinal folds, on either side of a smooth central tract. The cast was examined by Dr. Riddel, of New Orleans, and showed no epithelial cells, but simply amorphous or granular matter. The patient was discharged, well, April 1st.

Dr. ELLIS showed the specimen, which, he remarked, showed no evident traces of mucous or fibrous tissue, though there were some doubtful appearances of fibre and cellular tissue. It was probably a real slough.

II. *Cancer of the Eye*.—The patient was a private in the 1st Louisiana Vols., a German, who had always enjoyed good health. There was no similar disease known in his family or ancestors, so far as known. In December last, the left eye became inflamed and very painful. Soon afterwards it began to enlarge, and when seen by Dr. Homans it was of the size of a horse-chestnut. The humors had not been discharged, and there was much vascularity, hypertrophy and engorgement of the conjunctiva. The bones of the orbit were not affected.

The eyeball was removed by the knife and curved scissors, together with the entire contents of the socket. The bleeding, which was free, was controlled by a compress and bandage.

The tumor was encephaloid, softened in the centre to a red, grumous, semi-fluid consistence, and very vascular. Under the microscope the appearances were those of malignant growths, with some progress towards fatty degeneration.

III. *Compound Fracture of the Skull*.—The patient was brought into

the hospital with his face and clothes covered with blood. There was a compound fracture of the skull in the right parieto-temporal region, with considerable depression over a space a little larger than a silver dollar. Some hæmorrhage still continued. He was partially stupid, and talked incoherently. Pulse fair; pupils dilated. The wound was probably produced by a heavy blunt instrument, as a hammer or club. The patient having been etherized, the scalp was freely cut open, and portions of bone were removed, the largest being about an inch square. The thin bone of the temporal portion of the skull was found to be depressed, and was raised by means of an elevator. There was considerable hæmorrhage. Water dressing was applied. Four days after the operation he had epileptiform convulsions, but with this exception he steadily progressed to recovery, and in six weeks the wound was all but healed.

IV. *General Emphysema from Necrosis of the Ribs.*—A private in the 114th New York Reg't entered the Hospital Dec. 30th, and was treated for chronic diarrhœa; he also had necrosis of the tibia. On the 13th of February he came under Dr. Homans's care, with advanced phthisis. He went on without any rapid change till March 29th, when he began to have emphysema in the right side of the back, which extended very rapidly, and then went over to the left side, till the whole of the upper part of his body was puffed up like a balloon. The air extended down to the wrists, and even beneath the integuments of his fingers. The eyelids were so inflated that his eyes were closed. The emphysema stopped short at the thighs; there was no air beneath the integuments below the pelvis, except in the scrotum, which resembled a very thin bladder distended with air. He died March 7th.

At the autopsy, the right lung was found entirely filled with softened tubercles and cavities. The third, fourth and fifth ribs of the right side were more or less necrosed, and some spicula of bone were observed. There were two openings from the lung to the external surface of the chest, beneath the skin; one, through the posterior wall, beneath the right scapula, which was also necrosed, and another near the junction of the third rib with its sternal cartilage.

The liver was fatty, and contained a few tubercles. The spleen was large, and filled with tubercles. The mesenteric glands and intestines were also somewhat tuberculous.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 19, 1863.

THE LONDON LANCET AND THE PHYSICIANS OF NORFOLK.—The London *Lancet*, in a recent article entitled "Federal Foul Blows," rolls up its saintly eyes and raises its holy hands in a paroxysm of horror, at the recent action of the Federal Government, by which the physicians of Norfolk, Va., were obliged to take out the usual license required of all practising physicians, and in addition to take the oath of allegiance to the Government of the United States, as a condition of being allowed to pursue their professional avocations. Indeed, so shocked and

overwhelmed is that virtuous journal at the enormity of this requirement, that it cannot refrain from exclaiming, "Thank Heaven! our arms have never been disgraced by such cold-blooded cruelty." Blowing Sepoys from the mouths of cannon is nothing to it, of course. Speaking of the general character of the war, it says that it "seems to be dragging within its vortex, and destroying, all those decent considerations which distinguish civilized war from the gloating blood-thirstiness of the vindictive savage; at least so far as concerns one of the contending parties." It is plain enough to which of the contending parties this writer refers. In fact, the general malignancy and one-sidedness of the whole article would do justice to the *London Times* itself. But a word with regard to the special act which has called down upon our country such an outpouring of wrath.

The *Lancet* may not be aware that Norfolk is within the legitimate bounds of the territory of the United States. Temporarily and unnecessarily surrendered into the hands of the secessionists at the beginning of the rebellion, it was recovered more than a year and a half ago, and has since been held by the forces of the Government. The various municipal functions have been administered during that time under the authority of the United States; and by the law of conquest, if no other (supposing it to have been at any time properly under the authority of any other government), it is now as much within the scope of the laws of the United States as New York is. Now every physician in the country must pay his annual license tax or suffer the penalty. Very justly, all suspected and dangerous persons anywhere within the military line are liable to be called on to clear themselves from suspicion by taking the oath of allegiance. The secessionists of Norfolk, we happen to know, have been of a particularly aggravating and rancorous class. It is not long since one of them, and a physician, too, suffered the extreme penalty of the law for murdering a United States officer while in the discharge of his duty. There must have been special reasons for requiring the oath of allegiance of late; perhaps they may have grown out of a sense of insecurity caused by the withdrawal of most of our troops in that vicinity, and rumors which have been current of a purpose to attempt to wrest the city from the hands of the Government. We fully agree that when hostile armies meet, surgeons should be regarded as non-combatants; it would be a slightly redeeming feature in the course which the Southern rebels have pursued, if they had acted up to this principle, especially after avowing their purpose to do so. More than eighty of our surgeons starving in the prisons of Richmond at the present time, are a standing proof how much this principle of humanity or respect for their pledged word is valued by their chivalrous captors. Time would fail us to recount the gratuitous cruelties to which wounded prisoners have been subjected by the rebels, or the harsh treatment which our surgeons have received. We refer any one wishing for information on this subject, to the report of Surgeon John Swinburne to Surgeon-General Hammond on his experiences in the Peninsula Campaign, published in the Transactions of the New York State Medical Society for the current year.

So recently as the battle of Chicamauga we have abundant evidence of the same want of common humanity and regard for the usages of

war. We take the following extract from the *Sanitary Commission Bulletin* of November 1st:—

“On Tuesday, the 29th ult., and on Thursday, the 1st inst., ambulance trains were despatched to the field for our wounded left in the hands of the enemy. All who were severely wounded were paroled and brought in—those more slightly wounded being reserved for regular exchange, via Richmond. The men are uniform in their testimony as to the neglect and consequent suffering they experienced. Officers and men, including the surgeons who remained to take care of the wounded, were, in almost all cases, deprived of their blankets, overcoats, and in many instances shoes and other wearing apparel; they were robbed of the contents of their pockets—‘greenbacks’ being especially sought after. The food left for their subsistence was taken from them, and corn-meal and water furnished in its stead. They likewise suffered greatly from the impossibility of having their wounds properly attended to—the rebels having taken from our surgeons the greater portion of the appliances left for them—including instruments and bandages. The ambulances sent with a flag of truce for the wounded, ten days after the battle, and delivered into the hands of the enemy at their lines, were returned robbed of everything movable, and in many cases broken-down horses substituted for those sent out. These matters are referred to as affording another instance of the chivalrous character of our foe and the manner in which he *practises* the amenities of war, of which none better than he can *speak*.”

These cruelties, it must be remembered, were practised on the field of battle, where there was no redress. At Norfolk the circumstances under which a necessary severity was exercised were quite otherwise. Fully one half of the physicians there resident were ready to comply with the requirements of the authorities, and the Mayor, by public notice in the newspapers, invited loyal members of the profession to fill up the places made vacant by the nonconformists. Situated as Norfolk is, the physician who refuses submission to the laws of the United States becomes at once an open enemy, and has no right to claim the immunity of a noncombatant, which he thus defiantly casts from him. It must be evident to any one, with two ideas in his head, that a physician in such a place, circulating among all classes, going and coming at all hours, passing beyond the military lines on professional errands, must be above suspicion. So long, therefore, as treason is recognized as a crime, and is felt, as this country now feels it to be, one of the blackest dye, such tirades as that of the *London Lancet* are little better than the meanest Pharisaism and hypocrisy.

The *Lancet* is greatly exercised also by the conduct of the Federals at Williamsburg, after the retreat of the rebels from that place during McClellan's advance upon Richmond. We quote from that Journal as follows:—

“We add another relation to prove that it is not without good cause we protest against a kind of warfare which no Government claiming to be recognized amongst Christian nations has a right to practise:—

“The State of Virginia has an insane asylum at Williamsburg. When that town fell into the hands of the Federals there were 300 lunatics in the asylum. The physicians, keepers and nurses were driven away, and the friends of the inmates forbidden to see or minister to them. The institution was placed under military rule, and the management assigned to army surgeons, with common soldiers for nurses; and word was sent that if any attack were made the poor lunatics would be turned out and sent to Richmond, where was neither room nor accommodation for them.

“Comment on such proceedings is superfluous. Whoever does such deeds as these, or sanctions their being done, is a common enemy to humanity, disgracing alike the calling of the soldier and the dignity of the man.”

Now the simple truth is this. The day after the rebels left Williamsburg, abandoning everything to the Federals, they were in hasty retreat towards Richmond. The town was as quiet, to use the words of our informant who was there at the time, as a country village. The inmates of the hospital were tenderly cared for by the military authorities, and the rebel wounded left behind were supplied with comforts which they could not otherwise have obtained. At a subsequent period, when the small force left in charge of this place was obliged to evacuate it before a superior one under the rebel General Wise, the attendants in the hospital, who remained behind to fall into the hands of the enemy rather than desert their charge, were made prisoners, and the inmates were actually supplied with the necessaries of life sent back to Williamsburg by our own forces, by permission of the rebel commander! So much for the veracious *Lancet*. Verily it has reason to thank Heaven that its countrymen are not as other men are!

NEW HAMPSHIRE MEDICAL INSTITUTION.—The annual commencement of this Institution took place on Friday, Oct. 30th, 1863, at which the degree of Doctor of Medicine was conferred on the following gentlemen, viz. :—

NAMES AND RESIDENCE.

Samuel Fogg Bachelder, Loudon, N. H.
Henry Luzerne Bartholomew, Quincy, Ill.,
Wm. Henry Bowen, North Scituate, R. I.,
Wm. Augustus Butts, New Portland, Me.,
Henry Melville Chase, Lyme, N. H.,
Mark Hubbard Corwin, Chelsea, Vt.,
Orris Orange Davis, Brookfield, Vt.,
Levi Parker Dodge, New London, N. H.,
Richard Henry Green, A.B., Bennington, Vt.,
John Milton Grosvenor, Danvers, Mass.,
George Dexter Harris, Canaan, N. H.,
Alpheus Enos Hoyt, Framingham, Mass.,
Stephen Bartlett Kenney, Portland, Me.,

Charles Little, A.B., West Boscawen, N. H.,
Lewis Gould Lowe, A.M., Bridgewater, Ms.,
Charles Augustine McQuesten, Bangor, Me.,
Ephraim Carlos Meriam, Merrimac, N. H.,
La Roy Frederick Morse, Canterbury, N. H.,

Henry Clay Newell, A.B., St. Johnsbury, Vt.,
Andrew Mitchell Peables, Auburn, Me.,
Walter Scott Robinson, Weathersfield, Vt.,
Moses Wadleigh Russell, Sutton, N. H.,
Ira Cole Sawyer, Hiram, Me.,
Atwell William Swett, Hampden, Me.,
Charles William Thomas, Hampden, Me.,
Charles Oscar Towne, West Lebanon, N. H.,
Arthur Hervey Wilson, Rutland, Mass.,

THESES.

Tabes Mesenterica.
Diarrhœa.
Ergot.
Erysipelas.
Typhoid Fever.
Pneumonia.
Dysentery.
Typhoid Fever.
“ “
“ “
Inflammation of the Joints.
Extra-uterine Fœtation.
Upon the Mode of Pursuing the
Study of Medicine.
Digestion.
Chemistry and Medicine.
Camp Dysentery.
Croup.
Duties of the Accoucheur in Natu-
ral Labor.
Remittent Fever.
Hygiene.
Typhoid Fever.
Chronic Gastritis.
Diarrhœa.
Miasmatic Fevers.
Veratrum Viride.
Phthisis Pulmonalis.
Hygiene.

The Faculty of this Institution have adopted the New Haven rule of admitting Bachelor of Arts to an examination for degrees after two years study.

ALBERT SMITH, *Secretary.*

[We cannot refrain from remarking that the New Haven rule referred to is, in our opinion, a very bad one, and “more honored in the breach than in the observance.” It is unjust to other medical colleges

and to the profession at large. Graduates of such an institution ought not to be admitted *ad eundem* by our State Medical Society, and we hope the American Medical Association will take speedy cognizance of a system tending so directly to lower the standard of professional education.—EDITORS.]

THE LATE DR. ADAMS MOORE.—Died, in Littleton, N. H., on the 5th of November, 1863, Adams Moore, M.D., aged 64 years. He was a man of great social, moral, and professional worth, and his death is deeply felt, by a large circle of friends, and by the community where he resided. He originated in Bedford, N. H., and was graduated at Dartmouth College, in the year 1822. At a subsequent period he officiated, for a year or more, as tutor in that institution; but scientific and professional pursuits engaged his principal attention the remainder of his life. Having completed the requisite term of the study of medicine, with his teacher, the venerable Dr. Burns, of Littleton, and having practised a short period in Lowell, Mass., he finally settled in Littleton, and, to the day of his death, remained on the most friendly terms with the man who taught him, and who now lives to mourn his loss. Being a sober, discreet, and careful practitioner, his patients felt full confidence in his prescriptions. Possessing a modest, and somewhat retiring disposition, the real basis of his distinction was true merit, which all who knew him were ready to concede to him. His patriotism gave to his country's service, in her present struggle, a promising son, who, though yet a minor, died a brave and valuable officer on the field of battle. The settlement and early history of his adopted town became a matter of interest to him, and he accumulated the materials for an extended work on that subject, which his friends had hoped to see forthcoming at no distant period. Talents, industry, perseverance, fidelity, conscientiousness, morality, liberality, with all the social and domestic virtues, have endeared him to all who knew him.

E. C.

VITAL STATISTICS OF BOSTON.
FOR THE WEEK ENDING SATURDAY, NOVEMBER 14th, 1863.
DEATHS.

	Males.	Females.	Total.
Deaths during the week	42	46	88
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.2	36.5	70.7
Average corrected to increased population	00	00	77.46
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Sear. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
16	8	0	5	0	0	3	2

MARRIED.—In Dedham, Nov. 12th, Courtland Hoppin, M.D., of Providence, R. I., to Mary Frances, daughter of Joseph W. Clark, of Dedham.

DEATHS IN BOSTON for the week ending Saturday noon, Nov. 14th, 88. Males, 42—Females, 46.—Abscess (of neck), 1—accident, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 2—cholera infantum, 2—consumption, 16—convulsions, 3—croup, 8—debility, 1—diarrhoea, 1—diphtheria, 2—dropsy, 2—dropsy of the brain, 4—dyspepsia, 1—erysipelas, 1—typhoid fever, 3— hæmoptysis, 1—disease of the heart, 4—intemperance, 1—disease of the kidneys, 3—lockjaw, 1—congestion of the lungs, 1—inflammation of the lungs, 5—old age, 2—paralysis, 2—peritonitis, 3—pleurisy, 1—puerperal disease, 1—sore throat, 2—syphilis, 1—teething, 1—thrush, 1—unknown, 5—suppression of urine, 1.

Under 5 years of age, 34—between 5 and 20 years, 7—between 20 and 40 years, 18—between 40 and 60 years, 13—above 60 years, 16. Born in the United States, 51—Ireland, 24—other places, 13.

THE

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No. 17.

A CASE.

BY WALTER CHANNING, M.D.

[Read before the Suffolk District Medical Society, Oct. 31st, 1863, and communicated for the Boston Medical and Surgical Journal.]

In the autumn of 1808, six young men of New England, four being Cambridge and two Dartmouth men, met, without concert, in Philadelphia, and joined the medical class, which that session numbered 600. Of the students above referred to, four graduated in the spring. Five of the whole number were subsequently professors in various medical schools. Three are dead. The survivors are somewhat dilapidated, but still are in the field, which is the world, and may say with the Great Defender, "We still live"! One of the six, being of a meek and inquiring mind, put to the Professor of Theory and Practice, the following question: "What, Mr. Professor, do you think of morbid anatomy?"

"Less and less, Sir, every day I live."

We heard of the question and answer, and were not a little surprised at the reply. Some of us had studied with physicians who felt the deepest interest in autopsies. They were truly pets with them. To them they took their pupils, and much was learned of anatomy, healthy and morbid—as the places of organs, their relations, tissues, &c.—and with this knowledge came morbid appearances, which the master particularly marked out. For this knowledge the pupil had some work to do, and this not a trifle. It consisted in restoring the subject as nearly as possible to its state before dissection, with as much sewing, washing, wiping and dressing as would accomplish this important object. If this work was readily done for the most part, it sometimes had, at least to the pupil, exceptions.

The following case affords an argument of the greatest force against the above answer as to the question of the value of morbid anatomy.

Mr. —, aged 41, died in this city lately. He was of excellent constitution, with a gouty and rheumatic inheritance. A more

healthful man, apparently, is rarely met with. He was a merchant, and went to South America some years ago, and transacted a large commercial business there. His exposures were great to heat, cold, drought, rains. He had the diseases of the climate, and among these was yellow fever. He returned home, and continued to his death in the South American business. His habits were as active as his business allowed. He drove, fished, &c., making leisure when its need was clear. His mind was active, and both science and literature were favorite studies. He was hospitable, and many, many friends well remember the pleasant hours they have passed with him and his family. He was of excellent appetite, eating the best of food and drinking the best of liquors. This last fact deserves special notice. The appetite seldom failed, even in disease; and in convalescence soon regained its natural power—nay, seemed stronger, as if to make up for lost time. Digestion and nutrition were always perfect, even during sickness, or in those moments of it in which suffering had more or less disappeared. This may account for another fact. Mr. — rarely was emaciated by or during disease. To have seen him when convalescence was established, you would hardly suspect that he had been ill at all. One more fact. Mr. — was of indomitable will. This showed itself in disease as well as health, and gave some embarrassment to that department of therapeutics which relates to the period of convalescence. It was quite remarkable to observe how rarely this was disturbed by considerable deviations from what are generally regarded as the best established laws of convalescent diet.

I was for about sixteen years the medical adviser in Mr. —'s family. During this time he had four attacks of disease. The first was twelve years ago. Its seat was the abdomen. A remarkable obscurity involved the disease. It assumed a dangerous form, and my master in medicine, Dr. J. Jackson, was requested to meet me in consultation. He thought it would be fatal. Its symptoms were severe and general—pain, rapid pulse, with wide constitutional and local disturbance. Recovery took place suddenly, and health was rapidly reestablished.

The next disease which occurred to Mr. — began in the right iliac region. At first there was pain—then soreness—next enlargement, defined, hard and very tender. Suppuration occurred, with its usual precursors. The large abscess was opened, and discharged well. Convalescence soon came, with full appetite, increased strength, and full recovery.

Mr. — was next attacked with jaundice, which agreed well with his former maladies in the suddenness of attack and severity of its symptoms. It should have been said before, that he had frequent but short intercalary attacks of gout, for which he had learned that *vin. colch. rad.* was the best remedy, and of which he took such doses as he *felt* were indicated. His attacks of gout were so

well marked that the remedy was at once resorted to, and, as was said, with rapid removal of the symptoms.

The jaundice with which Mr. — was duly credited, had a complication which is occasionally observed. This is cough. The attack was in early summer, which was singularly illtimed, as a furnished house in G., hard by the sea, had been engaged. The day for leaving home had been fixed, and when it came, it proved rainy, and altogether inappropriate to the removal of a still quite diseased person from bed and chamber. Mr. — said he would go, let what might happen, or be produced, and he went. The length and severity of the disease had produced their usual effects, both weakness and loss of flesh. The appetite also was diminished.

I heard nothing from Mr. — for some days, when I was hastily summoned to G. As soon as I entered the house, a very disagreeable odor presented itself, and in the chamber it was so declared as to make it almost impossible to stop in it. Mr. — was found coughing very hard, and almost without intermission. The sputa were large, dark, and of an odor compounded of the faecal and putrid. The breathing was much embarrassed by the frequency and force necessary to remove the obstruction produced by the rapid accumulation of the sputa.

At length convalescence began, and, as usual with Mr. —, was rapid. Appetite occurred as before, and the slight loss of flesh and the physical weakness were soon lost in increase of normal flesh and strength.

After recovery, various transient but increasing troubles showed themselves, and in their gradual increase and new symptoms we may date the fourth and fatal disease of Mr. —. Diarrhoea and ischuria, with pain in the renal region and in the course of the ureters, formed prominent symptoms of the attack. I saw him only occasionally in visits to his family, as he had now called in another physician. The diarrhoea became a leading symptom. Thus he would have ten or twelve discharges in a night, with many in the course of every day, and this whatever his occupation—whether for pleasure, as fishing, &c., or when engaged in his business labors.

The dysuria at length rapidly increased. His strength continued remarkably, considering the severity of his symptoms. He did not lose flesh till after months' continuance of his troubles. His appetite remained. Food in usual quantities was well digested, and nutrition was well sustained. Various means were used for relief of pain, until at length sulphuric ether was resorted to, and for a time with much benefit—or rather relief of suffering. As this agent does not interfere with important functions, it was used as freely as circumstances demanded. At length flesh began to disappear, and so did strength. But Mr. — was still able to walk to his place of business—driving being resorted to when necessary. The complexion changed. It became pale and sallow, with the usual changes

in the expression of the features which grave organic and functional lesions bring with them. When ether failed, or nearly failed, to bring relief, opium was resorted to, and on one day an ounce of tincture of opium was taken, and about two quarts of Squibb's ether were used, with very little relief.

I was asked by his attending physician, Dr. E. Palmer, to meet him and Dr. J. Bigelow in consultation. I had not seen Mr. — for some weeks, and was struck with his manner and appearance. He was in great distress, at times amounting to agony. His skin had undergone great change, showing spots of various sizes, of a dark bluish or livid color. Some of them had a regular outline, while others were very irregular, having an appearance most like scorbutus. They were first seen about eight days before my visit. About five days before, the left knee-joint became bent, and at length to such a degree that the calf rested against the back part of the thigh. The joint was perfectly rigid, and the least effort to move it produced perfect agony. The largest and best-defined spot was upon this thigh. He insisted upon getting out of bed to pass water and fæces—frequent calls—which only increased his suffering.

The tongue was swollen in its lower aspect, and the surrounding tissues were of color similar to that of the skin. Its tip was turned, or rather curled, so that it rested against the roof of the mouth, making it difficult for liquids, which were strongly demanded, to reach the fauces.

In consultation it was agreed to add one part of chloroform to three or four of ether. The effect of this was at once observed. A very small quantity of the mixture did what large amounts of ether alone failed to do, and quiet sleep replaced the restlessness which pain had produced, and which doubtless had increased the suffering. In a day or two were symptoms of approaching death. The pulse became very rapid, consciousness diminished, and death occurred without apparent suffering.

Examination after death.—The thorax was first examined. The lungs and heart were healthy throughout; old adhesions existed between the liver and diaphragm, and between the latter and the lung. It will be recollected that cough occurred towards the close of the severe jaundice already described, and that large quantities of most offensive sputa accompanied the cough. I once alluded to these facts in Mr. —'s case, and expressed the opinion that an abscess had formed in the liver, and that by adhesions between the liver and diaphragm, and between that and the lung, ulceration preceded by adhesion had effected a communication between the liver, abscess and lung. But in neither liver nor lung was the slightest organic disease discovered. "What a repairer is nature!" said Dr. Ellis, who made the autopsy.

The abdomen was next and most thoroughly examined. Every organ, save the gall-bladder, was found to be perfectly natural.

This was long, irregularly cylindrical, as if it were drawn out, and terminating in the arch of the colon, where the ascending portion and arch meet. Between the cavity of the gall-bladder and the intestine were two large openings, evidently of long standing. The pancreatic duct was normal.

Incisions were made in the discolored spots before described. The discoloration extended more than half an inch from the surface, showing conclusively how important a part the blood disease had in the production of death.

It will be remembered that diarrhœa occurred between the attack of jaundice, and that which immediately preceded death, which last happened some years after.

There was one fact which accompanied the diarrhœa which was not accounted for. This was the remarkable preservation of flesh and general health. It was not till within a short time before death that loss of flesh occurred, and this was hardly emaciation. The appetite was excellent. The most nutritious food was taken at every meal. It was digested perfectly, and by the rapid absorption of the chyle—the healthful function of the lacteals—nutrition was accomplished; the repair was equal to the waste, and not unfrequently exceeded it. The bile, the natural cathartic, was poured into the colon, the receptacle of what the small intestines had no farther use for, and rapidly got rid of in formless or semi-liquid fæcal matter. The number of these evacuations was very large—ten or twelve in a night, and very often in the day and evening; and with all this to exhaust strength as well as flesh, no such exhaustion happened. Mr. ——— was a member of a mercantile firm, and upon him was laid the whole burden of correspondence, arrangements of voyages, &c. &c., while the shipping affairs devolved upon his partner. The correspondence referred to, the letters of Mr. ———, have been again and again spoken of to me, as the most perfect of their kind. Unless confined to the house by gout or rheumatism, which hardly ever happened, he was always at his post, working day in and day out, without uttering a word of fatigue.

The kidneys, ureters and bladder presented not the slightest appearance of disease. The skin showed stronger marks of disease than did any other tissue. Afterwards it was the only organ which bore the marks of disease, the gall-bladder being alone excepted. On what did this state depend? Or what was its cause? Blood poison? Nothing but a morbid condition of the blood can explain so extensive a lesion as the skin manifested. The adhesion of the gall-bladder to the colon, above described, was followed by two openings of the former into the latter. Would not these have been closed, as was the communication between the liver and lung, had not the constant current of the bile kept the channel open?

Dr. Ellis, in most kind reply to a request that he would furnish me with notes of the autopsy, has sent me the enclosed, for which,

and for many other expressions of friendly regard, I feel exceedingly obliged to him. And who of the profession, who have availed themselves of his admirable skill in such works, have failed to receive like expressions of his cheerful readiness to comply with their requests?

OCT. 30th, 1863.

DEAR SIR,—I find the following record of Mr. ——'s case:—A very large bluish spot over the upper part of the chest marked the seat of a large effusion of blood into the cellular tissue and muscle below. Much blood was also infiltrated among the muscles of the neck. There was also a large effusion of blood into the anterior mediastinum. The right lung adhered strongly to the diaphragm. The left was also slightly adherent at the base. The liver adhered to the diaphragm, but with the exception of limited superficial thickening of one portion of the capsule, there was no disease. The gall-bladder was firmly united to the large intestine at the junction of the ascending and transverse portions. Two large openings, with smooth edges, established free communication between the cavities. Calculi, or rather masses of biliary matter, filled the smaller extremity of the gall-bladder. The other organs presented no remarkable peculiarities.

NOTES BY THE WAY.

[Communicated for the Boston Medical and Surgical Journal.]

BY M. W. CASE, M.D., TREMONT, ILLINOIS.

TUESDAY morning, Oct. 27th, found me in Chicago, the western metropolis, a deeply-interested spectator of the opening ceremonies of the "Great Northwestern Sanitary Fair." No words of mine can add to the tribute of honor that has been paid to those noble-hearted ladies who originated and carried on this gigantic enterprise.

But there are *Sanitary* institutions that for many years have been steadily at work, doing more to benefit and alleviate the sufferings of mankind than all other institutions combined; and yet the good people know but little about them, and seemingly care less. Our Medical Colleges are doing more for suffering humanity than all the Sanitary Commissions in the world could do without them. Reflections like these led me to visit the Medical Colleges of this city.

My first visit was to RUSH COLLEGE, a plain, substantial brick edifice, at the corner of Dearborn and Indiana streets. The Lecture rooms will seat about 250 students. When I arrived at the Hall, Ephraim Ingalls, Professor of Materia Medica and Medical Jurisprudence, was lecturing to a class numbering over 200. My impression is that I have never seen a class where so large a proportion were near the meridian of life, and I certainly have never seen one that gave better attention to the professors. They do not take notes, especially in College Clinics, as *much* as they will wish

they had when they experience the perplexing cares of a physician's daily routine of professional life. Professor Ingalls is a pleasant, interesting lecturer, affable in conversation, and is well liked by his class.

The next lecturer I had the pleasure of listening to, was R. L. Rea, Professor of Anatomy. Prof. Rea is a skilful anatomist. As a lecturer he is thorough, and if the members of his class do not come out good anatomists, it will not be through any fault of his. He speaks very rapidly, perhaps at times a little too much so, but he does not fail to keep the attention of the class much better than professors of anatomy are generally able to do. I am informed by those who know, that, as a kind-hearted and attentive surgeon and physician, he has not a superior in Chicago.

J. Adams Allen, Professor of the Principles and Practice of Medicine and Clinical Medicine, I had the pleasure of listening to at the College Clinic. Prof. A. is the favorite with the class. Few men have an equal faculty to instruct and amuse at the same time. Several times during the hour he brought down the house, and an *en-core* from the class would not have surprised me. Prof. Allen is a progressive man, and thinks good air, proper food and exercise, and unlimited faith in Prof. Brainard, are the only essentials to a perfect cure for all curable diseases.

A lecture on Chemistry, by Prof. E. S. Carr, who ranks among the first in the country as a chemist, closed this interesting day at Rush. I very much regret that want of time prevented me from listening to Professors Brainard, Freer, Holmes and Lynn. The former of these gentlemen, the presiding genius of this Institution, I expected to have met at Hospital Clinics, but was disappointed.

Rush College numbers some 600 graduates, and its present flourishing condition is gratifying to all interested in medical progress.

ON FERMENTATION AS A CAUSE OF VARIOUS DISEASES.

By M. POLLI.

M. POLLI, of Milan, has recently published two very interesting memoirs on fermentation as a cause of various diseases, from which we extract some of the more important facts.

Chemists who have, of late years, investigated with the greatest success the phenomena of fermentation, have observed that this mode of reaction amongst organic principles has a much greater importance than was suspected. It is, in fact, to fermentation that the spontaneous decomposition of animal and vegetable tissues is due, such as gangrene, dry-rot, *cremation*, &c., and the whole series of successive transformations that organic substances undergo until they are converted into water, carbonic acid, ammonia and mineral matters. It is by fermentation that fatty bodies give gly-

cerine; that salicine furnishes glucose; that myronate of potash is converted into essential oil of mustard; that neutral substances, such as urea and allantoin, form ammonia; that amygdaline produces the poisonous substances, oil of bitter almonds and hydrocyanic acid.

Ferments act by contact or by catalysis. Sometimes they are living creatures, sometimes very active substances which are not organized. Diastase, emulsine and pepsine perform the part of ferments. They may cause organic substances to double, become hydrated or isomeric.

According to M. Polli, there exists a great analogy between the processes of fermentation and many organic metamorphoses which occur in some diseases. An albuminous matter which in a particular state of alteration acts as a ferment, and particular substances which proceed from its action; this is the basis of the humoral theory.*

But analogy is not sufficient of itself; it has been shown by carefully conducted experiments that the blood in disease undergoes alterations and variations in its composition, and that artificial disease may be produced bearing a strong resemblance to natural disease, by injecting into the bloodvessels substances which act as ferments. Multiple abscesses, induced by the injection of pus into the veins of dogs; septic affections caused by injecting purulent putrid matters into the veins of animals; diseases presenting all the characteristics of typhoid fever, and caused by the injection of putrefied blood into the circulating current; finally, contagious diseases, such as glanders, which is produced by the injection of glanderous humors, are facts which prove that a general affection may be induced by the simple introduction into the blood of a substance capable of acting as a ferment. The diseases which may be called catalytic, in which the morbid matter produces metamorphoses by contact with the alterable principles of the blood, are the primary cause of all the symptoms presented by the animal economy. In short, it is impossible to deny that fermentation may be produced in the blood.

But admitting that the starting-point of many diseases is the action of a specific ferment in the blood, is it possible to prevent its effects, to render it inactive in the living organism, as we may do apart from the body, by many chemical means? This is the great point which gives interest to this pathological question.

M. Polli believes that he has proved, by a series of facts and conclusive experiments, that it is possible to neutralize morbid ferments in the blood of animals by chemical substances which do not act in a manner incompatible with life; and it is by these substances

* According to M. Pasteur, ferment is not albuminous matter altered by oxygen, but an organized being, the germ of which is brought by the air. The presence of albuminous matter is an indispensable condition of all fermentations, because such substances are necessary to the production of the ferment.

that we must hope to treat successfully those diseases of which fermentation is the primary cause.

It is well known that sulphurous acid gas prevents alcoholic and acetic fermentation, and also the fermentation of animal substances and organic matters in general. Thus it arrests, if it be already begun, the fermentation produced by saliva and diastase in contact with starch, the fermentation which myrosine produces in the paste of black mustard flour, that which is produced by emulsine on the amygdaline of bitter almonds, &c.

M. Polli has proved that alkaline or earthy sulphites possess the same antiseptic and decolorizing properties. This is a very important fact, since it admits of the application of sulphurous acid in therapeutics. He thinks, also, that he has ascertained that the action of sulphurous acid and of sulphites on coloring matters, as well as on ferments, is neither a deoxygenation, a combination, nor a destruction, but simply a molecular modification.

This mode of action of sulphurous acid and sulphites explains the valuable property which these chemical compounds possess of preventing or energetically arresting the action of morbid ferments artificially introduced into the blood of animals, without altering its composition in such a manner as to be incompatible with life.

From a great number of experiments made upon dogs, and alluded to in his memoirs, M. Polli has determined the safe and efficacious dose of sulphites for internal administration, the changes which they undergo in the organization, and their curative action in the affections produced by the injection of putrid or contagious matters into the blood.

The following are some of his experiments, selected from those of the last-mentioned series:—

1. Ten grammes of sulphite of soda were given to a dog during a period of five days, then one gramme of pus was injected into the femoral vein. The animal became dull, and refused the food which it was offered, but the next day its spirits returned and it ate willingly. Two days after, the same experiment was repeated and was followed by the same results. At the end of a few days the animal was perfectly cured.

2. One gramme of pus was injected in two portions into the veins of a dog, of a more robust nature than that operated upon in the preceding experiment. The animal became spiritless, but the next day took some food; the following day it was very low, it breathed with difficulty, its wounds were sanious, its left leg and foot swollen, and it died ten days afterwards.

3. An equal quantity of putrid blood was injected into the veins of three dogs; one died five hours after the infection, another after five days of illness, and the third, to which some sulphite of soda had been administered, after having experienced some trifling symptoms of illness, rapidly recovered.

4. Numerous other experiments made with putrid blood and moribund mucus proved that the animals died with all the symptoms of a general infection, whenever sulphite of soda was not administered, and that, on the contrary, they speedily recovered under its influence.*

If these facts should be confirmed by other experiments, M. Polli will have rendered an inestimable service to therapeutics, and will have thrown some light on the yet obscure cause of numerous diseases.—*Pharm. Journ. and Trans.*, London, April, 1863, from *Journal de Pharmacie et de Chimie*.

THE PHYSIOLOGICAL EFFECTS OF EXERCISE UPON THE HUMAN BODY.

TRANSLATED FROM CANSTATT'S JAHRESBERICHT.

THE investigations of Speck, upon the influence of exercise on the human body, embrace two new series of experiments, which the author made upon himself, and those which he made on two persons, aged 23 years, and one upon a young man of 19 years. His conclusions are as follows:—

Corporeal exercise has, as its consequence, the diminution of the weight of the body. Since there is but a small change, unless the weight of the body be at once determined, after the exercise has been taken, there might be an error in the estimate. The diminution in the weight ceases contemporaneously with the cessation of the muscular activity;—in case there should continue any excretory action after the muscles are at rest, this should not be included in the estimate of the loss. The researches of Speck afford no positive evidence whether or no moderate muscular exercise favors a reparation of the loss sustained.

The use of water during corporeal exercise appears to act differently than during inaction: during rest, the use of water diminishes the weight of the body; on the contrary, during action, the drinking of water is accompanied by an augmentation of the body's weight, the water being probably retained to compensate for the loss of fluids, which otherwise ensues.

Muscular exertion constantly diminishes the whole quantity of urine which is excreted; during action, the quantity may be reduced to two-thirds, or even one-half of the normal amount. The cause of the diminution of the quantity of the urine during action, is, that there is, during exercise, an increased cutaneous transpiration;—hence, during exercise, the urinary excretion contains more solid materials than usual, so that, in this respect, muscular activity becomes an important agent in promoting renal elimination.

* For a notice of the sulphites tried by Prof. Polli, see the current volume of the "*Pharmaceutical Journal*," p. 37.

During labor, the skin and the lungs become the main excretory outlets; the excretory processes are more active at the close of the afternoon than during the forenoon. During active exercise, the perspiration may be increased to three-fold its usual amount;—after the exercise has ceased, the perspiration is rapidly reduced, or may wholly cease.

The faecal evacuations are, as a rule, less during exercise than during repose. Food of the same kind appears to be alike digested during repose or muscular activity;—it is probable that the less weight of the excrements, during exercise, is dependent upon the want of the aqueous element. Intestinal peristalsis occurs more slowly during violent exercise.

There has been observed no perceptible alteration in regard to the quantity of urea which is eliminated during active bodily exercise. * * * Physical exercise increases, to a great extent, the amount of uric acid that is discharged;—indeed, it is augmented beyond any other urinary ingredient; for example, it is augmented to double or even three-fold its normal amount. As the use of the water diminishes the relative amount of the uric acid in urine, so, on the contrary, free perspiration increases it.

Since the perspired matter contains, in considerable quantity, chloride of sodium, hence, when the cutaneous transpiration is profuse, the quantity of chloride of sodium in the urine is lessened.

All researches made indicate a considerable increase of sulphuric acid in the urine during exercise;—this augmentation continues for some time after the exercise has been discontinued. The perspiration seems to remove little or no sulphuric acid.

Phosphoric acid is also considerably augmented in the urine, both during and after exercise; the quantity of this acid which is excreted during free perspiration appears less than that during diminished perspiration, hence the inference that there is a portion of phosphoric acid excreted also through the skin. * * *

The quantity of the air which traverses the lungs is gradually increased from morning until evening, so that, in the evening, from 8 to 9 o'clock, the maximum is attained. Exercise very notably augments this amount; the augmentation is manifest, even when the number of respirations remains the same. The quantity of carbonic acid which is eliminated is more increased than the amount of air;—for example, during gentle exercise the elimination of this gas becomes double the normal standard, and during violent exercise the quantity of carbonic acid excreted is augmented to three-fold the usual amount.

The heat of the organism is somewhat increased by exercise, though, soon after the exercise has ceased, the temperature rapidly sinks even to a point below the normal degree. The production of the perspiration appears to be accompanied with an increase of bodily heat. The lowest temperature of the body is in the morn-

ing, the highest at mid-day, and in the evening there occurs a diminution again.

The following interesting item, we translate from *Canstatt's Jahresbericht*—last number issued—which shows that, in the intercommunication between mother and offspring, even foreign matter may pass from the mother to the young, through milk as well as placental blood.

The fact having previously been noticed by Flourens, that the bones of the fœtus became colored red, when the mother has been fed upon red coloring matter, he extended his observations still further, and has found that the bones of the young offspring become red-tinted, when, during the period of nursing, its mother feeds upon reddened food. The experiment succeeded perfectly in young suckling pigs, of which the bones became red in from fourteen to twenty days. Since, however, the pigs might have eaten some of the reddened food of the mother, Flourens selected another class of animals for experiment, in which this source of error could not exist, viz., albino rats and rabbits. In the albino rat, the skeleton became red in eleven days; in the albino rabbit, the same phenomenon occurred in nine days; though not a trace of reddened matter had been eaten by the young, since they had lived wholly upon the milk of their mothers. [The coloring material usually employed in these experiments is that from the *Rubia tinctoria*, or madder.—Ed.]
—*San Francisco Med. Press.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 26, 1863.

MAN'S PLACE IN NATURE.—But a few years ago, less than a decade, and men of science, whose word was unquestioned law, had established the order of the universe. They had exhausted the secrets of creation, had explored and proclaimed the history of the globe from chaos to the latest spring; had arranged the distribution and succession of organic life upon its ever-shifting surface; had fixed the date of man's appearance upon it, and the depth of water below which all was blank, azoic darkness; they had announced that no more species of large animals remained to be discovered, and as a *finis* to the last and complete chapter in the natural history of mammalia, the chief of England's learned men assigned them their proper places in a new classification based upon the structure of the brain. It appeared to be forgotten that these questions had been settled by man just as dictatorily several times before them, and that perhaps another Columbus or Copernicus might arise to disarrange *their* final settlement of earthly and celestial matters. Within a few short years, however, and the sounding-line has brought up from the vast depths of ocean living proof of their anima-

tion by God's light and life; many large and hitherto unknown mammals, including races of the *genus homo*, have been brought to our knowledge, and the existence of fossil man has been placed beyond all question.

It is unfortunate, but true, that many of our most eminent men of science, who have won by their labors the believing attention of the public, are wont to assume an authoritative tone, when speaking of the phenomena of nature, as if they were her ruler instead of her interpreter. Nature must move along to suit their theories, and the observations of younger eyes and earnest seekers must coincide with their teachings, or they abuse their influence over the public by cautioning it against all new comers. A decided manifestation of this spirit has been exhibited in the history of the discussions which have arisen within a short time in relation to the re-examination of the question of man's rank in the zoological scale. Prof. Owen, in the work above alluded to, on the classification of the mammalia, removed man from the Linnæan order of Primates, and assigned him a new and distinct place in creation. The reason of this was founded, as he stated, upon the following anatomical grounds:—

“Not only do the cerebral hemispheres overlap the olfactory lobes and cerebellum, but they extend in advance of the one and further back than the other. The posterior development is so marked, that anatomists have assigned to that part the character of a third lobe; *it is peculiar to the genus Homo, and equally peculiar is the posterior horn of the lateral ventricle and the ‘hippocampus minor’ which characterize the hind lobe of each hemisphere.*”—*Journal of the Proceedings of the Linnæan Society*, Vol. ii., p. 19.

Since that time, although it has been proved by numerous dissections, beyond question and in the most public manner, that these assertions are contrary to fact, he has reiterated them on all occasions, and without adducing any argument or preparation in their support.

Among those who have been most zealous in searching for the truth in this and similar questions connected with the natural history of man, is Prof. Huxley, who, although a progressionist, is nevertheless a most thorough and conscientious student, and one who believes in the recognition of the truth in science without regard to consequences and preconceived theories. His essay upon man's place in nature, based upon most careful anatomical analyses, must claim the respectful attention even of those who do not care to follow where his deductions seem to lead. He has treated this difficult and important question with so much research, and yet, in so simple and pleasing a manner, that we cannot refrain from quoting from his pages at length, although some of our readers may not be disposed to claim so close a relationship with the apes as comparative anatomy hints at.

“The study of development affords a clear test of closeness of structural affinity, and one turns with impatience to inquire what results are yielded by the study of the development of man. Is he something apart? Does he originate in a totally different way from dog, bird, frog and fish, thus justifying those who assert him to have no place in nature and no real affinity with the lower world of animal life? Or does he originate in a similar germ, pass through the same slow and gradually progressive modifications—depend on the same contrivances for protection and nutrition, and finally enter the world by the help of the same mechanism? The reply is not doubtful for a moment, and has not been doubtful any time these thirty years. Without question, the mode of origin and the early stages of the development of man are identical with those of the animals imme-

diately below him in the scale : without a doubt, in these respects, he is far nearer the apes, than the apes are to the dog. * * * *

"But, exactly in those respects in which the developing man differs from the dog, he resembles the ape, which, like man, has a spheroidal yolk-sac and a discoidal—sometimes partially lobed—placenta.

"So that it is only quite in the later stages of development that the young human being presents marked differences from the young ape, while the latter departs as much from the dog in its development, as the man does.

"Startling as the last assertion may appear to be, it is demonstrably true, and it alone appears to me sufficient to place beyond all doubt the structural unity of man with the rest of the animal world, and more particularly and closely with the apes."

Passing from a comparison founded upon the development of man during foetal life to the examination of his adult and perfect structure, and that of the animals immediately below him, he says:—

"Let us endeavor for a moment to disconnect our thinking selves from the mask of humanity; let us imagine ourselves scientific Saturnians, if you will, fairly acquainted with such animals as now inhabit the earth, and employed in discussing the relations they bear to a new and singular 'erect and featherless biped,' which some enterprising traveller, overcoming the difficulties of space and gravitation, has brought from that distant planet for our inspection, well preserved, may be, in a cask of rum. We should all, at once, agree upon placing him among the mammalian vertebrates; and his lower jaw, his molars, and his brain, would leave no room for doubting the systematic position of the new genus among those mammals, whose young are nourished during gestation by means of a placenta, or what are called the 'placental mammals.'

"Further, the most superficial study would at once convince us that, among the orders of placental mammals, neither the whales nor the hoofed creatures, nor the sloths and ant-eaters, nor the carnivorous cats, dogs, and bears, still less the rodent rats and rabbits, or the insectivorous moles and hedgehogs, or the bats, could claim our '*Homo*' as one of themselves.

"There would remain, then, but one order for comparison, that of the apes (using that word in its broadest sense), and the question for discussion would narrow itself to this—is man so different from any of these apes that he must form an order by himself? Or does he differ less from them than they differ from one another, and hence must take his place in the same order with them?

"Being happily free from all real, or imaginary, personal interest in the results of the inquiry thus set afoot, we should proceed to weigh the arguments on one side and on the other, with as much judicial calmness as if the question related to a new opossum. We should endeavor to ascertain, without seeking either to magnify or diminish them, all the characters by which our new mammal differed from the apes; and if we found that these were of less structural value than those which distinguish certain members of the ape order from others universally admitted to be of the same order, we should undoubtedly place the newly discovered tellurian genus with them.

"I now proceed to detail the facts which seem to me to leave us no choice but to adopt the last-mentioned course."

He then goes on to draw a minute comparison between the structure of the bony frame, the skull, the teeth; and the feet and hands of man and the highest apes, and passing to the subject of the structure of the brain, he proceeds,

"As if to demonstrate, by a striking example, the impossibility of erecting any cerebral barrier between man and the apes, nature has provided us, in the latter animals, with an almost complete series of gradations from brains little higher than that of a rodent, to brains little lower than that of man. And it is a remarkable circumstance, that though, so far as our present knowledge extends, there is one true structural break in the series of forms of Simian brains, this hiatus does not

lie between man and the man-like apes, but between the lower and the lowest Simians; or, in other words, between the old and new world apes and monkeys, and the lemurs. Every lemur which has yet been examined, in fact, has its cerebellum partially visible from above, and its posterior lobe, with the contained posterior cornu and hippocampus minor, more or less rudimentary. Every marmoset, American monkey, old world monkey, baboon, or man-like ape, on the contrary, has its cerebellum entirely hidden, posteriorly, by the cerebral lobes, and possesses a large posterior cornu, with a well developed hippocampus minor." * * * *

"When the gravest errors respecting points so easily settled as this question respecting the posterior lobes, can be authoritatively propounded, it is no wonder that matters of observation, of no very complex character, but still requiring a certain amount of care, should have fared worse. Any one who cannot see the posterior lobe in an ape's brain is not likely to give a very valuable opinion respecting the posterior cornu or the hippocampus minor. If a man cannot see a church, it is preposterous to take his opinion about its altar-piece or painted window—so that I do not feel bound to enter upon any discussion of these points, but content myself with assuring the reader that the posterior cornu and the hippocampus minor have now been seen—usually at least as well developed as in man, and often better—not only in the chimpanzee, the orang, and the gibbon, but in all the genera of the old world baboons and monkeys, and in most of the new world forms, including the marmosets.

"In fact, all the abundant and trustworthy evidence (consisting of the results of careful investigations directed to the determination of these very questions, by skilled anatomists) which we now possess, leads to the conviction that, so far from the posterior lobe, the posterior cornu, and the hippocampus minor, being structures peculiar to and characteristic of man, as they have been over and over again asserted to be, even after the publication of the clearest demonstration of the reverse, it is precisely these structures which are the most marked cerebral characters common to man with the apes. They are among the most distinctly Simian peculiarities which the human organism exhibits." * * * *

"So far as cerebral structure goes, therefore, it is clear that man differs less from the chimpanzee or the orang, than these do even from the monkeys, and that the difference between the brains of the chimpanzee and of man is almost insignificant, when compared with that between the chimpanzee brain and that of a lemur.

"It must not be overlooked, however, that there is a very striking difference in absolute mass and weight between the lowest human brain and that of the highest ape—a difference which is all the more remarkable when we recollect that a full-grown gorilla is probably pretty nearly twice as heavy as a Bosjes man, or as many an European woman. It may be doubted whether a healthy human adult brain ever weighed less than thirty-one or two ounces, or that the heaviest gorilla brain has exceeded twenty ounces.

"This is a very noteworthy circumstance, and doubtless will one day help to furnish an explanation of the great gulf which intervenes between the lowest man and the highest ape in intellectual power;* but it has little systematic value, for

* I say *help* to furnish: for I by no means believe that it was any original difference of cerebral quality, or quantity, which caused that divergence between the human and the pithecoïd stirps, which has ended in the present enormous gulf between them. It is no doubt perfectly true, in a certain sense, that all difference of function is a result of difference of structure; or, in other words, of difference in the combination of the primary molecular forces of living substance; and, starting from this undeniable axiom, objectors occasionally, and with much seeming plausibility, argue that the vast intellectual chasm between the ape and man implies a corresponding structural chasm in the organs of the intellectual functions; so that, it is said, the non-discovery of such vast differences proves, not that they are absent, but that science is incompetent to detect them. A very little consideration, however, will, I think, show the fallacy of this reasoning. Its validity hangs upon the assumption, that intellectual power depends altogether on the brain—whereas the brain is only one condition out of many on which intellectual manifestations depend; the others being, chiefly, the organs of the senses and the motor apparatuses, especially those which are concerned in prehension and in the production of articulate speech.

"A man born dumb, notwithstanding his great cerebral mass and his inheritance of strong intellectual instincts, would be capable of few higher intellectual manifestations than an

the simple reason that, as may be concluded from what has been already said respecting cranial capacity, the difference in weight of brain between the highest and lowest men is far greater, both relatively and absolutely, than that between the lowest man and the highest ape. The latter, as has been seen, is represented by, say twelve, ounces of cerebral substance absolutely, or by 32 : 20 relatively; but as the largest recorded human brain weighed between 65 and 66 ounces, the former difference is represented by more than 33 ounces absolutely, or by 65 : 32 relatively. Regarded systematically the cerebral differences, of man and apes, are not of more than generic value—his family distinction resting chiefly on his dentition, his pelvis, and his lower limbs.

"Thus, whatever system of organs be studied, the comparison of their modifications in the ape series leads to one and the same result—that the structural differences which separate man from the gorilla and the chimpanzee are not so great as those which separate the gorilla from the lower apes."

How Prof. Huxley is prepared to answer the moral objections to his conclusions, and the unsupported dicta of autocrats in science, may be judged by the following bold and beautiful language; and we trust that every physician will read at his earliest opportunity the whole of this essay upon a question of so vast interest and importance.

"Science has fulfilled her function when she has ascertained and enunciated truth; and were these pages addressed to men of science only, I should now close this essay, knowing that my colleagues have learned to respect nothing but evidence, and to believe that their highest duty lies in submitting to it, however it may jar against their inclinations.

"But desiring, as I do, to reach the wider circle of the intelligent public, it would be unworthy cowardice were I to ignore the repugnance with which the majority of my readers are likely to meet the conclusions to which the most careful and conscientious study I have been able to give to this matter, has led me.

"On all sides I shall hear the cry—'We are men and women, not a mere better sort of apes, a little longer in the leg, more compact in the foot, and bigger in brain than your brutal chimpanzees and gorillas. The power of knowledge—the conscience of good and evil—the pitiful tenderness of human affections, raise us out of all real fellowship with the brutes, however closely they may seem to approximate us.'

"To this I can only reply that the exclamation would be most just and would have my own entire sympathy, if it were only relevant. But, it is not I who seek to base man's dignity upon his great toe, or insinuate that we are lost if an ape has a hippocampus minor. On the contrary, I have done my best to sweep away this vanity. I have endeavored to show that no absolute structural line of demarcation, wider than that between the animals which immediately succeed us in the scale, can be drawn between the animal world and ourselves; and I may add the expression of my belief that the attempt to draw a psychological distinction is

orang or a chimpanzee, if he were confined to the society of dumb associates. And yet there might not be the slightest discernible difference between his brain and that of a highly intelligent and cultivated person. The dumbness might be the result of a defective structure of the mouth, or of the tongue, or a mere defective innervation of these parts; or it might result from congenital deafness, caused by some minute defect of the internal ear, which only a careful anatomist could discover.

"The argument, that because there is an immense difference between a man's intelligence and an ape's, therefore there must be an equally immense difference between their brains, appears to me to be about as well based as the reasoning by which one should endeavor to prove that, because there is a 'great gulf' between a watch that keeps accurate time and another that will not go at all, there is therefore a great structural hiatus between the two watches. A hair in the balance-wheel, a little rust on a pinion, a bend in a tooth of the escapement, a something so slight that only the practised eye of the watchmaker can discover it, may be the source of all the difference.

"And believing, as I do, with Cuvier, that the possession of articulate speech is the grand distinctive character of man (whether it be absolutely peculiar to him or not), I find it very easy to comprehend, that some equally inconspicuous structural difference may have been the primary cause of the immeasurable and practically infinite divergence of the Human from the Simian Stems."

equally futile, and that even the highest faculties of feeling and of intellect begin to germinate in the lower forms of life. At the same time no one is more strongly convinced than I am of the vastness of the gulf between civilized man and the brutes; or is more certain that whether *from* them or not, he is assuredly not *of* them. No one is less disposed to think lightly of the present dignity, or despairingly of the future hopes, of the only consciously intelligent denizen of this world.

"We are indeed told by those who assume authority in these matters, that the two sets of opinions are incompatible, and that the belief in the unity of origin of man and brutes involves the brutalization and degradation of the former. But is this really so? Could not a sensible child confute, by obvious arguments, the shallow rhetoricians who would force this conclusion upon us? Is it, indeed, true, that the poet, or the philosopher, or the artist, whose genius is the glory of his age, is degraded from his high estate by the undoubted historical probability, not to say certainty, that he is the direct descendant of some naked and bestial savage, whose intelligence was just sufficient to make him a little more cunning than the fox, and by so much more dangerous than the tiger? Or is he bound to howl and grovel on all fours because of the wholly unquestionable fact, that he was once an egg, which no ordinary power of discrimination could distinguish from that of a dog? Or is the philanthropist or the saint to give up his endeavors to lead a noble life, because the simplest study of man's nature reveals, at its foundations, all the selfish passions and fierce appetites of the merest quadruped? Is mother-love vile because a hen shows it, or fidelity base because dogs possess it?

"The common sense of the mass of mankind will answer these questions without a moment's hesitation. Healthy humanity, finding itself hard pressed to escape from real sin and degradation, will leave the brooding over speculative pollution to the cynics and the 'righteous overmuch' who, disagreeing in everything else, unite in blind insensibility to the nobleness of the visible world, and in inability to appreciate the grandeur of the place man occupies therein.

"Nay more, thoughtful men, once escaped from the blinding influences of traditional prejudice, will find in the lowly stock whence man has sprung, the best evidence of the splendor of his capacities; and will discern in his long progress through the past, a reasonable ground of faith in his attainment of a nobler future.

"They will remember that in comparing civilized man with the animal world, one is as the Alpine traveller, who sees the mountains soaring into the sky and can hardly discern where the deep shadowed crags and roseate peaks end, and where the clouds of heaven begin. Surely the awe-struck voyager may be excused if, at first, he refuses to believe the geologist, who tells him that these glorious masses are, after all, the hardened mud of primeval seas, or the cool slag of subterranean furnaces—of one substance with the dullest clay, but raised by inward forces to that place of proud and seemingly inaccessible glory.

"But the geologist is right; and due reflection on his teachings, instead of diminishing our reverence and our wonder, adds all the force of intellectual sublimity to the mere æsthetic intuition of the uninstructed beholder.

"And after passion and prejudice have died away, the same result will attend the teachings of the naturalist respecting that great Alps and Andes of the living world—Man. Our reverence for the nobility of manhood will not be lessened by the knowledge, that man is, in substance and structure, one with the brutes; for, he alone possesses the marvellous endowment of intelligible and rational speech, whereby, in the secular period of his existence, he has slowly accumulated and organized the experience which is almost wholly lost with the cessation of every individual life in other animals; so that now he stands raised upon it as on a mountain top, far above the level of his humble fellows, and transfigured from his grosser nature by reflecting, here and there, a ray from the infinite source of truth."

INSPECTING SURGEONS OF VOLUNTEERS IN MASSACHUSETTS.—The following is a list of the gentlemen detailed by Surgeon General Dale, as

inspecting surgeons in this State under the late call of the President of the United States for 300,000 volunteers.

Berkshire County.—Pittsfield :—Oliver E. Brewster, M.D., late Surgeon 40th Mass. Vols., who is authorized to appoint surgeons in such towns as the public convenience may require, the same to be approved by Medical Director U. S. A. and Surgeon General Massachusetts.

Hampden County.—Wm. G. Breck, M.D., Springfield, who is authorized as above.

Hampshire County.—A. W. Thompson, M.D., Northampton, and D. W. Minor, M.D., Ware, authorized as above.

Franklin County.—Frederick A. Sawyer, M.D., of Greenfield, late Surgeon of the 52d Mass. Vols., and C. W. Duncan, M.D., Shelburne, who are authorized as above.

Worcester County.—Southwest District :—F. D. Brown, M.D., of Webster, authorized as above. Northwest District :—Warren Tyler, M.D., late Assistant Surgeon 36th Mass. Vols., Brookfield, and J. C. Batchelder, M.D., late Assistant Surgeon 25th Mass. Vols., Templeton, who are severally authorized as above. East District :—J. Henry Robinson, M.D., of Southborough, authorized as above. Worcester North :—Alfred Hitchcock, M.D., Alfred Miller, M.D., of Fitchburg, and A. D. Peck, M.D., of Sterling, severally authorized as above. Worcester Centre :—Joseph Sargent, M.D., Henry Clark, M.D., and Rufus Woodward, M.D., of Worcester, severally authorized as above. Worcester South :—Francis Leland, M.D., late Surgeon of 2d Mass. Vols., authorized as above.

Middlesex County.—First District :—A. B. Bancroft, M.D., Charlestown. Malden, Melrose, Somerville—J. L. Sullivan, M.D., authorized as above. Second District :—Belmont, Brighton, Waltham, W. Cambridge—A. C. Wheeler, M.D., late Surgeon 43d Mass. Vols., and Fred. Winsor, M.D., late Surgeon 49th Mass. Vols., Cambridge, severally authorized as above. Third District :—Ashland, Framingham, Holliston, Hopkinton, Natick, Newton, Sherborn, Sudbury, Wayland, Weston—Henry Bigelow, M.D., of Newton Corner, Louis E. Partridge, M.D., of Natick, and Otis E. Hunt, M.D., of Weston, severally authorized as above. Fourth District :—Acton, Ashby, Boxborough, Carlisle, Concord, Dunstable, Groton, Lincoln, Littleton, Marlborough, Pepperell, Shirley, Stow, Townsend, Tyngsborough, Westford—Henry A. Barrett, M.D., of Concord, J. Q. A. McCollester, M.D., late Surgeon 53d Mass. Vols., of Groton, William W. Clafin, M.D., late Assistant Surgeon 13th Mass. Vols., of Marlborough, severally authorized as above. Fifth District :—Bedford, Burlington, Lexington, Medford, Stoneham, Wilmington, Winchester, Woburn—Charles V. Bemis, M.D., Medford, authorized as above. North Reading, South Reading, Reading, F. F. Dole, M.D., authorized as above. Sixth District :—Chelmsford, Billerica (attached), Dracut, Lowell—Elisha Huntington, M.D., of Lowell, authorized as above.

Essex County.—First District :—Lynn, Nahant, Swampscott, Lynnfield, Saugus—Edward Newhall, M.D., of Lynn, and James M. Nye, M.D., of Lynn, authorized as above. Marblehead—H. H. F. Whittemore, M.D. Second District :—Danvers, South Danvers, Middleton—Geo. Osborn, M.D., of So. Danvers, authorized as above. Salem—Geo. A. Perkins, M.D. Wenham, Hamilton, Topsfield, Rowley (at-

tached):—John L. Robinson, M.D., late Assistant Surgeon 8th Mass. Vols., authorized as above. Third District:—Andover, North Andover, Boxford, Lawrence, Methuen—Joseph Kittredge, M.D., North Andover, and Daniel Dana, Jr., M.D., of Lawrence, late Surgeon 14th Mass. Vols., authorized as above. Haverhill and Bradford—O. S. Lovejoy, M.D., authorized as above. Fourth District:—Amesbury, Georgetown, Groveland, Newbury, Newburyport, Salisbury, West Newbury—Yorick G. Hurd, M.D., late Surgeon of the 48th Mass. Volunteer Militia, authorized as above. Fifth District:—Beverly—Charles Haddock, M.D., late Surgeon 8th Mass. Vol. Militia. Essex, Ipswich—Joseph E. Bomer, M.D., of Ipswich. Gloucester, Manchester—H. E. Davidson, M.D. Rockport—Benj. Haskell, M.D., severally authorized as above.

Suffolk County.—James F. Harlow, M.D., Stephen Mighill, M.D., Wm. H. Page, M.D., Adino B. Hall, M.D., Boston. D. McB. Thaxter, M.D., Joseph Gould, M.D., late Asst. Surgeon 4th Mass. Militia, South Boston. M. B. Leonard, M.D., East Boston. Wm. G. Wheeler, M.D., Chelsea, who are authorized as above.

Norfolk County.—North District:—Brookline, Roxbury, Dorchester, West Roxbury—John S. Flint, M.D., Roxbury, authorized as above. East District:—Braintree, Randolph, Milton, Stoughton, Quincy, Weymouth—C. C. Holmes, M.D., of Milton, and Appleton Howe, M.D., of Weymouth, authorized as above. West District:—Bellingham, Canton, Dedham, Dover, Foxborough, Franklin, Medfield, Medway, Needham, Sharon, Walpole, Wrentham—Ebenezer Burgess, M.D., of Dedham, A. LeBaron Monroe, M.D., of Medway, and Ezra Abbot, M.D., of Canton, severally authorized as above.

Bristol County.—Attleborough—John R. Bronson, M.D. Easton, Norton, Taunton, Mansfield, Raynham—Ira Sampson, M.D., of Taunton, authorized as above. South District:—Dartmouth, New Bedford—Andrew Mackie, M.D., authorized as above. West District:—Berkley, Dighton, Fall River, Freetown, Rehoboth, Seekonk, Somerset, Swansea, Westport—Foster Hooper, M.D., of Fall River, authorized as above.

Plymouth County.—North District:—Abington, Cohasset, Hanover, Hingham, Hull, Scituate, S. Scituate—J. E. Harlow, M.D., of Hingham, authorized as above. South District:—North Bridgewater (attached), Acushnet, Bridgewater, Carver, Fairhaven, Lakeville, Mattapoisett, Wareham, Marion, Rochester, East Bridgewater (attached), West Bridgewater (attached), Middleborough—Asa Millett, M.D., of Bridgewater, Wm. E. Sparrow, M.D., of Mattapoisett, and Woodbridge R. Howes, M.D., of Mattapoisett, late Asst. Surgeon 3d Mass. Vol. Militia, authorized as above. Middle District:—Duxbury, Halifax, Hanson, Kingston, Marshfield, Pembroke, Plymouth, Plympton—Alexander Jackson, M.D., of Plymouth, and Joseph Hager, M.D., of Marshfield, authorized as above.

Barnstable, Nantucket and Dukes Counties.—Cape District:—Brewster, Chatham, Dennis, Eastham, Harwich, Orleans, Provincetown, Truro, Wellfleet, Yarmouth—Franklin Dodge, M.D., of Harwich, E. W. Carpenter, M.D., of Chatham, George Shove, M.D., of Yarmouthport, severally authorized as above. Island District:—Barnstable, Chilmark, Edgartown, Falmouth, Nantucket, Sandwich, Tisbury—Elisha P. Fearing, M.D., of Nantucket, Edwin H. Maybury,

M.D., of Edgartown, Jonathan Leonard, M.D., of Sandwich, John M. Smith, M.D., of Barnstable, authorized to appoint as above.

THE following order has been issued by the Secretary of War:—
The employment of women nurses in the U. S. General Hospitals will in future be strictly governed by the following rules:—

1. Persons approved by Miss Dix, or her authorized agents, will receive from her or them "certificates of approval," which must be countersigned by Medical Directors upon their assignment to duty as nurses within their Departments.

2. Assignments of "women nurses" to duty in General Hospitals will only be made upon application by the surgeons in charge, through Medical Directors, to Miss Dix or her agents, for the number they require, not exceeding one to every thirty beds.

3. No females, except Hospital Matrons, will be employed in General Hospitals, or, after Dec. 31, 1863, borne upon the Muster and Pay Rolls, without such certificate of approval and regular assignment, unless specially appointed by the Surgeon-General.

4. Women nurses, while on duty in General Hospitals, are under the exclusive control of the senior medical officer, who will direct their several duties, and may be discharged by him when considered supernumerary, or for incompetency, insubordination, or violation of his orders. Such discharge, with the reasons therefor, being endorsed upon the certificate, will be at once returned to Miss Dix.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, NOVEMBER 21st, 1863.

DEATHS.

	Males.	Females.	Total
Deaths during the week	46	40	86
Ave. mortality of corresponding weeks for ten years, 1853—1863,	37.7	37.2	74.9
Average corrected to increased population	00	00	82.06
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
17	3	3	4	0	0	4	2

PAMPHLETS RECEIVED.—Hints for the Control and Prevention of Infectious Diseases, in Camps, Transports, and Hospitals. (Issued by the Sanitary Commission.)—A Report on Hospital Gangrene, Erysipelas and Pyæmia, as observed in the Departments of the Ohio and the Cumberland, with cases appended. By M. Goldsmith, Surgeon U.S.V. Published by permission of the Surgeon-General U.S.A.

MARRIED.—At Dorchester, 18th inst., Conrad Wesselhæft, M.D., to Miss Lily T., daughter of William Pope, all of Dorchester.—At Newton Corner, 17th inst., Thomas B. Hitchcock, M.D., to Miss Sarah S. Hill, all of Newton.

DIED.—At South Abington, Nov. 10th, Charles Henry Haskell, M.D., aged 31.—At South Beddington, Me., Nov. 7th, Thomas Kemble Thomas, M.D., formerly of Roxbury, Ms.

DEATHS IN BOSTON for the week ending Saturday noon, Nov. 21st, 86. Males, 46—Females, 40.—Accident, 1—apoplexy, 1—inflammation of the brain, 1—bronchitis, 3—burns, 1—cancer, 2—cholera infantum, 2—consumption, 17—convulsions, 4—croup, 3—diphtheria, 8—dropsy, 3—dropsy of the brain, 1—drowned, 1—scarlet fever, 3—typhoid fever, 4—gastroenteritis, 1—disease of the heart, 2—hernia (strangulated), 1—infantile disease, 2—intemperance, 2—jaundice, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 4—marasmus, 1—measles, 2—paralysis, 2—peritonitis, 1—puerperal disease, 1—purpura, 1—scrofula, 2—teething, 1—unknown, 4.

Under 5 years of age, 33—between 5 and 20 years, 13—between 20 and 40 years, 17—between 40 and 60 years, 10—above 60 years, 13. Born in the United States, 56—Ireland, 23—other places, 7.

THE

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THURSDAY, DECEMBER 3, 1863.

No. 18.

SURGICAL CASES.

[Communicated for the Boston Medical and Surgical Journal.]

Records of Cases admitted into the Surgical Wards of the West Wing of the Massachusetts General Hospital, under the care of Dr. R. M. HODGES, during the four months preceding Nov. 1, 1863; by S. W. LANGMAID, Surgical House-pupil.

INJURIES OF THE HEAD.

I.—SEPT. 5. Female, aged 18. When 9 years of age fell down two flights of stairs, striking upon her head. Her life was despaired of for many days, but she finally recovered. The scalp was not lacerated at the time of the accident, and no bone was removed or discharged, nor did any sore of the scalp form subsequently to the injury. At the end of a year she had an epileptic fit, and they have recurred ever since, sometimes with intervals of six weeks, again five or six in quick succession. These fits are of a severe character, and affect chiefly the left side of the body. Her intellect has been growing feeble of late, strabismus of the right eye has come on, and she wears a semi-idiotic expression. On right side of head, over parietal protuberance, there is a very considerable depression of the skull. A consultation advised trephining, and the parents feeling how great a burden the patient is to herself and all around her, accept the risk which the operation involves. It was undertaken Sept. 6th. On reflecting the scalp, what appeared to be a depression was found to be a loss of substance, an aperture half an inch in diameter existing in the parietal bone, the edges of which were bevelled down to extreme thinness. An accidental opening in the fibrous membrane which covered this foramen gave issue to a large quantity, probably two or three ounces, of pure, limpid serum. The introduction of a probe detects no irregularity or outgrowth of the bone around the borders of the aperture on the inside. Further operative measures were therefore abandoned. The flow of serum ceased during the afternoon. The next day, Sept. 7th, the patient's condition was apparently improved; she

looked brighter, and said that her head was relieved from a feeling of tightness and weight which she had long experienced.

8th.—Slight fever; occasional spasms of facial muscles and arm.

9th.—Spasms continue. Wine whey and beef-tea were ordered, as she seemed pale and feeble and inclined to be cold about the extremities.

10th.—No particular change.

12th.—Two convulsions; very drowsy.

13th.—Unconscious; snoring; left arm rigid; pulse 58, small.

14th.—Last evening convulsions continued. Died at two o'clock this A.M. No autopsy permitted. The wound of the scalp had nearly healed.

II.—July 19th. Male, aged 25. On the 25th of last month was struck upon the head by a hoe in the hands of a fellow-laborer; was insensible for an hour afterwards. A sensation of oppression came on with his returning consciousness, and has continued ever since. One week ago he had a "fit"; did not fall, though he was unconscious for a short time. Paralysis of the left arm immediately followed the blow, and until this fit there had been a gradual return of the muscular power; since then there has been no improvement. Yesterday he had a second fit; did not lose his consciousness, but was unable to articulate, and had a choking sensation and spasmodic contraction of left arm and leg. Patient is despondent; walks mopingly about ward; his appetite and digestion are good, and his pulse is natural; is able to extend his left arm from the side of his body, but ability to flex the forearm is limited. There is a rectangular cicatrix on right side of head above ear, at the angle of which is an unhealed point discharging pus, and at which probe detects dead bone, none of which, however, is loose enough to be removed. Is put upon vegetable diet, and to have a laxative pill every night. Poultice to wound.

27th.—Had a fit, lasting ten minutes, accompanied by contraction of facial muscles. Retained consciousness throughout, but could not speak.

31st.—Feels better and grows stronger.

Aug. 6th.—Has had no recurrence of his fits, and in a slowly but constantly improving condition of general health is discharged.

31st.—Patient readmitted. The dead bone being loose, it was removed under ether; a large hole was left in the parietal bone, the circumference of which was studded with osteophytic growths projecting inwards; several of these were broken off, one as large as a filbert, and altogether a very large amount of osseous tissue was abstracted.

Sept. 1st and 2d, he had several convulsive attacks, accompanied by a partial loss of consciousness. On the 3d, he had frequent muscular twitchings and several severe paroxysms of cramp in his left leg. From this time he began again to improve, and although very

nervous and continually in dread of the return of the fits, he was sufficiently well to leave the Hospital Sept. 21. His wound was still discharging.

III.—July 22. M., 5. By the fall of a stove, which was being hoisted through the scuttle of a store, this little patient's skull has been fractured, as well as his left leg near the middle, both bones being broken and the tibia protruding through the integuments. The scalp is laid open along the median line from the forehead to the occiput. There exists a fracture of similar extent, with divergent fissures, and a depressed fragment, an inch wide and one and a half inches long, is removed from the anterior portion. The membranes beneath are lacerated, and some of the wounded cerebral tissue protrudes. Is unconscious, pale, and has a feeble pulse and cold extremities. The continued application of ice to the head is directed, and hot water to the feet; wine whey and beef-tea freely.

23d.—Very restless. Still unconscious.

24th.—More quiet. Answers questions.

25th.—Crying all day. Semi-conscious. Stimulants required and given. Impossible to keep the fractured leg in any proper position.

29th.—Condition much the same; hands and face swollen; complexion pale and waxy.

30th.—At the request of the parents, was discharged.

About a month afterwards the child reappeared, having come from East Boston and walked some little distance from the horse-cars to the Hospital. A large granulating surface exists in the site of the wound, and at the bottom of this are several large plates of denuded and necrosed bone, with granulations sprouting up between the fissures which separate them. A fortnight later he returned, and the whole of this dead bone was removed without causing the least suffering. The fractured leg has firmly united, with but little deformity. This patient has not been seen again, but his condition at the last visit was such as to authorize the belief that he has entirely recovered.

Remarks.—The preceding cases illustrate the well-known facts that the gravest accidents not only follow severe injuries of the head, but that sometimes, when these might most be expected, the patient recovers without any untoward symptoms. It is true of the last case, No. III., while remarkable that the child should have even survived the wounds received, the real dangers have not yet had time to show themselves; a year elapsed in Case No. I. before the consequences of the injury, which finally rendered life a burden, began to appear, and they may yet be manifested in that of the little boy. Case No. II., in which a marked nervous element existed, had, notwithstanding, many symptoms too real to clear it from apprehension as to the ultimate issue. Its history while in the Hospital shows well the benefit of rest, quiet, regular and appropriate diet,

and how much may be accomplished by a few weeks of strict and careful regimen. In Case No. I., although death followed the evacuation of the cerebro-spinal fluid, it can hardly be assumed to have been in consequence. It is an interesting fact that whilst the circumstances of its escape place the occurrence very nearly on a par with an experimental evacuation, and isolate from the case the severe lesions which accompany fractures of the vault of the cranium, when a much readier egress is often given to the fluid, it should not have been followed by the great disturbance of the cerebral functions which succeeded its withdrawal in the subjects of Magendie's experiments. The rapidity with which the fluid is regenerated, and the fact that its reproduction restores the nervous centres to their natural state, leads to the inference that death in this case was due to meningeal inflammation set up by the admission of air to the membranes, rather than to the evacuation of the cerebro-spinal fluid.

FRACTURES AND DISLOCATIONS.

Thirty-three cases of fracture were admitted, viz.:—5 of the humerus; 1 of the humerus and both bones of the forearm; 4 of both bones of forearm; 2 of radius; 1 of ribs; 1 of femur and pelvis; 2 of femur; 1 crest of ilium; 16 of leg, viz., 12 of tibia and fibula, 4 of tibia. Of these last, 8 were near the ankle, 3 being instances of Pott's fracture; 3 were above the ankle, but in the lower third, 3 were in the middle, and 2 were in the upper third of the leg.

One dislocation of the head of the humerus into the axilla, and one of the acromial end of the clavicle, were all that were admitted. The latter was from direct violence whilst shackling cars. Unlike the majority of these cases, it was easily retained in position, and at the end of eight days the patient was discharged.

Remarks.—The treatment of these fractures was in no respect unusual. Most of those of the lower extremity were placed in starch or dextrine bandages at the end of a fortnight or three weeks, the latter being preferred from its more easy manipulation, and because it not only dries sooner and is firmer when dry, but is more reliable in damp weather, when starch frequently either refuses to stiffen, or if it does, stiffens in a very imperfect and unsatisfactory manner. Great convenience was often found, especially in oblique fractures of the tibia, from suspending the foot to a cradle by a broad strip of adhesive plaster attached to the sole of the foot, lifting it just enough to clear the heel from the bed or fracture box; it not only keeps the lower fragment of the fracture from tilting up by the weight of the foot, but relieves the heel from the pain caused by pressure and averts the annoying accident of an ulceration, the obstinate character of which was well illustrated in one case, where forty-five days were required to heal over an apparently insignificant sore, when but thirty-nine were necessary to consolidate the fracture which it followed. The great length of time re-

quired for the consolidation of oblique fractures was shown in three cases of broken leg, which, although firm enough to be discharged from the Hospital, still admitted of some motion at the end of seventy-seven, seventy-four and forty-nine days respectively. In two of the fractures of the thigh the only treatment adopted consisted in extension by weights from adhesive straps carried up the sides of the limb as high as the seat of fracture, compressing splints around the thigh itself, and counter-extension by means of the weight of the body, the lower part of the bed being lifted six inches from the floor by placing its two legs in wooden cups turned for this purpose. The result was entirely satisfactory in one of the cases; the other terminated fatally on the seventh day, the pelvis being fractured and the urethra ruptured. The third case of fracture of the thigh was a compound, comminuted one, the bone having protruded on the under surface of the limb. This was suspended in a "Smith's anterior splint" for convenience of dressing, as the wound, which was largely dilated, suppurated profusely. Eighteen days after the receipt of the injury, during the adjustment of the splint, which had slipped, sudden hæmorrhage occurred, and before it could be arrested the patient had lost so much blood that he died within an hour. It was ascertained that a sharp fragment of bone had pressed upon and so nearly ulcerated through the popliteal vein, that a slight movement had sufficed to cause its rupture.

DISEASES OF JOINTS.

Hip Disease.—I.—M., 8½. First entered Hospital May 22d, 1863, and was discharged June 30th, greatly relieved. July 14th, re-enters much as on first admission. Pain in hip and sometimes in knee. Flexion or rotation cause great suffering. Nates flattened; limb elongated; lies on right side with thigh partially flexed; appetite small, pulse rapid and feeble. Moderate extension was applied by means of adhesive plasters attached to the sides of the leg from above the knee, and from which traction was made by a cord passing over a pulley at the end of the bed, to which a weight was appended.

Aug. 3d.—Tenderness so much less that Sayre's splint was applied.

Aug. 5th.—Walks in the garden without stick or crutch, and without pain.

Aug. 22d.—Discharged, and when seen a month afterwards, patient walked perfectly well, was free from pain, and in excellent general health. Still wears the splint.

II.—M., 19. Hip disease of only two months' standing. Shortening at least two inches. Walks only with crutches. Some pain on motion, but not commensurate with the amount of constitutional disturbance present. Pulse very small and rapid. Cheeks flushed. Frequent attacks of diarrhœa, increasing emaciation. On entrance, Aug. 15th, extension was applied with the effect of gradually bringing the limb down. Sayre's splint was applied Oct. 1st, and on

the 6th, patient was discharged, walking quite well, and with the affected limb nearly as long as the other. A month after his discharge, being able to walk without assistance, his splint required fresh adhesive straps; those which were then applied produced so much irritation as to oblige the removal of the apparatus. His symptoms immediately returned, and he re-entered the Hospital Nov. 5th.

III.—M., 10. Hip disease of two years standing. Entered Sept. 17th, in a condition of great suffering from pain in the joint; the limb is very much drawn up, and extremely sensitive. Extension by a weight of only two pounds gave relief to his symptoms in 24 hours. Sayre's splint applied Oct. 13th. Walks about with crutches on the 18th, and Nov. 1st begins to go a little without them.

IV.—F., 23. Hip disease when three years old, resulting in a partial ankylosis and a shortening of five inches. Two months before entrance, Sept. 25th, wrenched her hip by a fall. Starting pains and severe aching in both hip and knee followed, and gradually obliged her to give up work. Rest and extension with a three-pound weight at once relieved all her symptoms.

Oct. 31st.—Although still in the Hospital, she may be considered as well and ready to be discharged.

Diseases of Knee-joint.—I.—M., 5. When $1\frac{1}{2}$ years old, fell and struck his knee. Has suffered ever since, every now and then being laid up by pain in the knee, which has gradually enlarged and become deformed, assuming the characteristic shape of chronic disease of the joint. Five weeks ago the limb began to contract and the knee to grow more and more painful. On entrance, July 6th, the leg is flexed to nearly a right angle, the joint is sensitive to the slightest pressure, and there is considerable constitutional disturbance. Extension by a weight of six pounds, the foot of the bed being raised six inches, caused great relief, and was increased two pounds on the 13th.

Aug. 1st.—The limb was straight enough to permit a splint being applied to the ham. He was still kept at rest, but carried out doors every day.

Oct. 15th.—A dextrine bandage was substituted for the splint, and he was allowed to walk about a little. On the 26th he was discharged, well.

II.—F., 4. Disease of knee one year. Four weeks since, the leg began to contract and the knee to grow more painful. Tibia displaced backwards; patella sunk between the enlarged condyles. No effusion of fluid in the joint. Leg at nearly a right angle with the femur.

Aug. 17th.—Extension by a small weight.

Sept. 23d.—Straight enough to allow application of splint.

Oct. 26th.—Dextrine bandage applied.

Nov. 1st.—Although not yet discharged, may be considered well.

III.—M., 19. Chronic synovitis of knee of seven months stand-

ing. Treated by rest, tinct. of iodine, compressed sponge, and discharged well at the end of thirty days, wearing a dextrine bandage.

One other case of chronic synovitis and two of diseased wrist-joint were under treatment, the former being discharged well and the latter relieved. The treatment generally pursued is illustrated in the cases briefly detailed.

A conductor on a horse railroad entered with inflammation of the wrist-joint, coming on without known cause. He had had gonorrhœa for four weeks, but, although the symptoms were much like those of rheumatism, no other joint was affected. Under rest and poultices the symptoms disappeared, and at the end of five days he was discharged.

A young woman, aged 28, entered with an enlarged bursa over the patella, which had been incised with a small crucial incision outside the Hospital. At the end of a fortnight she was able to go out well.

Remarks.—Although none of the cases of hip disease had reached the advanced stage so often seen among out-patients, and when its treatment offers so little encouragement, in all of them the constitution had begun to sympathize with the local trouble, and the patients were beginning to show the cachectic and enfeebled condition due to long-continued pain and in-door confinement. The great relief which so promptly followed extension in every case was very satisfactory, and showed itself at once in the changed countenances of the patients. Inasmuch as the subcutaneous division of the muscles about the hip causes, in many cases of advanced coxalgia, a most marked change for the better, it is probable that extension acts similarly, by arresting their constant and irritating action on the inflamed articulation, and not by separating the two surfaces of the joint, as was once supposed; this could only be effected by a very great degree of traction, if indeed it would be practicable at all. The result of extension is also shown to be followed by as favorable results in certain stages of disease of the knee as of the hip-joint.

The beneficial effects of pressure with compressed sponge in promoting the absorption of effused lymph or synovial fluid, are continually experienced in the Hospital. A sheet of sponge put under a hydraulic press and squeezed down to a thickness of three-fourths of an inch, bound on to a joint whilst dry and then wetted, produces by its expansion, as it absorbs the water, a powerful pressure of an equal and continuous character, extremely efficient in reducing the induration which accompanies many old cases of chronic synovial disease, and acting rapidly on the effusion of fluid within the capsule of the articulation.

AMPUTATIONS.

Of Upper Extremity.—I.—M., 13. Gun-shot wound of humerus. Amputation close to head of bone. Discharged forty days after operation. Wound entirely healed.

II.—F., 3. Horse-car accident. Amputation of arm close to head of humerus. Discharged twenty-seven days after operation. Wound entirely healed.

III.—M., 21. Fracture of elbow-joint and laceration of muscles of arm from discharge of fowling-piece loaded with small shot. Amputation just above middle of humerus. Discharged thirty-one days after operation. Wound entirely healed.

IV.—M., 45. Amputation of thumb, for injury, at carpo-metacarpal articulation. Operation followed by deep cellular inflammation up the forearm. Parts healed and inflammation subsided thirty days after amputation.

V.—M., 22. Amputation of thumb, for injury, at middle of proximal phalanx. Discharged at end of thirty-five days. Wound entirely healed.

VI.—M., 14. Amputation of thumb, for gun-shot injury, at middle of proximal phalanx. Discharged at end of seventeen days. Wound nearly healed.

VII.—M., 42. Amputation of distal phalanges of index and middle fingers, for injury. Discharged at end of eighteen days. Wounds entirely healed.

VIII.—M., 38. Amputation of index finger, at metacarpo-phalangeal articulation, for disease of bone following a felon. Discharged at end of fourteen days. Wound entirely healed.

Lower Extremity. Double Amputations.—IX.—M., 32. Rail-road accident. Amputation of right thigh at upper third; of leg, just below knee. Wounds nearly healed, forty days after operation.

X.—M., 5½. Legs crushed by a truck. Amputation of right thigh at middle. Disarticulation of left foot at the tarso-metatarsal joints. Death from exhaustion, eleven days after operation.

XI.—M., 24. Rail-road accident. Amputation of both legs just below the knee. Death from shock, twelve hours after operation.

Single Amputations.—XII.—M., 28. Gun-shot wound of knee-joint at battle of Gettysburg. Amputation of thigh in lower third, twenty-three days after injury. Death, apparently from pyæmia, six days after operation.

XIII.—M., 26. Compound fracture. Amputation of leg four inches below knee. Discharged thirty-five days after operation. Wound nearly healed.

XIV.—M., 58. Rail-road accident. Amputation of leg just below knee. Removed by friends at end of eight days.

XV.—M., 47. Compound fracture. Amputation of leg just below knee. Under treatment.

In connection with these cases may be mentioned one of gun-shot wound, in which the metacarpo-phalangeal articulation of the thumb was excised; one of crushing of the thumb, in coupling cars, where the shaft of the proximal phalanx was removed; and one, where the thumb was crushed in the machinery of a steam engine,

in which the whole metacarpal bone and half the proximal phalanx were removed. All these cases resulted admirably, healed rapidly, and left very useful substitutes for a perfect thumb.

Remarks.—With a single exception (Case No. I.), all the large amputations were performed by the circular method. Case XII. was that of a Lieut. in the 11th Mass. Vols., who, fourteen days before his admission, was wounded in the inside of the thigh, just above the knee, by a Minié bullet; no wound of exit. The second day after his entrance, two free incisions were made along the outside of the knee, giving vent to a large amount of pus. The operation revealed a total disorganization of the joint, necrosis of the bones and separation of the internal condyle; this was loose and was removed. He had had diarrhœa ever since the injury. Nine days after admission, his condition seemed to warrant amputation, and, after consultation, it was performed, with the loss of very little blood. On the third and fourth days from the operation he had severe chills, and then complained of great oppression in breathing; his skin became jaundiced, his diarrhœa continued, delirium set in, and he gradually failed in strength and died six days after the amputation. On examining the limb after its removal, the bullet was found lying in the joint; the lower extremity of the femur was much comminuted and the patella fractured; the soft parts were extensively infiltrated with pus, and the cartilage of the articulation ulcerated and detached at various points. The very grave nature of the accidents, in all the cases of amputation of the lower extremity, explains the mortality which followed them.

[To be continued.]

CANCNUM ORIS.

BY S. L. SPRAGUE, M.D.

[Read before the Boston Society of Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

ROBERT BRECKHEIMER, 5th Ky. Reg't, Co. B, 21 years of age, is a native of Germany. He lives in Louisville, Ky. He was taken prisoner at Chattanooga on the 18th of June, 1862, and sent to Macon, Ga., where he was a prisoner until the 15th of October, four months. He was then sent North, and arrived with ninety-nine other prisoners at Trinity Hospital, Washington, on the 21st October, 1862. He was fed at Macon the same as the other prisoners, on bacon and corn meal, which last they cooked themselves. They had no vegetables, but very little salt, and no coffee or sugar. His condition on entering the Hospital was wretched in the extreme. He was debilitated so that he could not walk, emaciated to a skeleton. He had chronic and exhausting diarrhœa. His legs and feet were œdematous and covered with spots of purpura. He was covered with vermin, and his head was sore and alive with pediculi.

He, with several others, was put into my ward. A warm bath, clean shirt and comfortable bed improved his condition very much. He complained of a sore mouth, which he had one week before he left Macon. His cheek was inflamed and swollen, and his breath very offensive. A warm linseed poultice was ordered for him that evening. The next morning there was a slough of the cheek, and a large hole was made, exposing the jaw and teeth of the left side. I had the wound washed with a solution of chloride of soda, and gave him, internally, sulphate of quinine, tincture of chloride of iron, and chlorate of potassa.

Nov. 2d—Ten days after his arrival, at the Hospital, he was much improved. The diarrhoea was somewhat checked by astringents. His appetite was good, and potatoes, onions, stewed apples, &c., were given to him freely.

The wound was increasing, so that now the mouth at the left angle was but slightly connected by a strip of flesh. The wound was two inches square and quite painful.

Dec. 1st.—The edges of the wound are now healed, and it has ceased to extend further. The opening caused by the slough has extended into the mouth, so that the mouth is continuous with the wound. Ten days ago he was quite free from pain, but recently pain has returned, and is constant. The teeth of the jaw which are exposed are loose. The jaw is bare and of a dark color.

January .—The wound was healed, leaving a large opening which exposed the jaw. His appetite was good, and he had gained flesh; was able to walk about. He wore a bandage over the opening to hide the deformity, and also to aid him in eating and drinking.

He obtained his discharge about the 15th, and left the Hospital.

As far as I could ascertain, he had not been sick at Macon, and had taken no medicine, except for the diarrhoea; and therefore this disease, *cancrum oris*, cannot be attributed to mercury.

Gangrene originating from the same cause, a weak and vitiated system, occurred in the ward above me, which came under my notice. This was gangrene of the foot; there was an elimination of the eschar, the bones of the foot separated, and there was spontaneous amputation of the foot, known as Chopart's operation. The foot was left hanging by the tendons which were cut off. This man was in a low condition, and did not recover. There were two other cases of gangrene of the feet which came under my notice, each having gangrene of both feet involving the whole to the ankle-joint. The line of demarcation formed, and the legs were amputated just above the ankle, and the patients, when last I heard, were in a fair way of recovery. These cases of the feet were spontaneous gangrene of the extremities, as classified by Nélaton.

ON PHENIC ACID.

ITS ACTION ON VEGETABLES, ANIMALS, FERMENTS, POISONS, VIRUS, MIASMAS,
AND ITS APPLICATIONS TO HYGIENE, TO THERAPEUTICS, AND TO
THE ANATOMICAL AND INDUSTRIAL SCIENCES.

By M. LE DOCTEUR JULES LEMAIRE.

As the subject treated of in these papers is of considerable practical importance, we shall present our readers with a short abstract of them.

Phenic acid ($C_{12}H_6O, HO$) was discovered in 1834 by Runge, who has given it the name of carbolic acid. Laurent, who studied this body, and described many of its combinations, designates it under the name of phenic and hydrate of phenyle, because he objects to place it among the acids. Gerhardt gave it the name of phenol. It has also received the names of phenic alcohol, of spyrol, and of salicone. [In this country the acid is best known in trade as carbolic acid.]

It has been formed synthetically by M. Berthelot, by passing alcoholic or acetic acid vapors through a porcelain tube heated to redness. The acid is also obtained in the dry distillation of benzoin, quinic acid, the resin of xanthorrea hastilis, castoreum, and chromate of pelosine. Gerhardt has obtained it from salicylic acid by the action of lime or baryta. Stædeler has found that the urine of man, the horse and cow contain it in quantities easily perceivable. It exists also in commercial creasote; but it is from the oil from gas tar, which contains it in considerable quantity, that it is obtained.

Preparation.—The oil from coal tar is submitted to fractional distillation. The part which passes over between 160° and 190° is treated with a solution of hot saturated caustic potash and some powdered potash. A mass of crystals is thus obtained, which may be separated by decantation of the fluid.

“When this mass is dissolved in water the solution separates into two layers, one light and oily, the other heavy and watery. The latter is separated and treated with hydrochloric acid, which sets free the carbolic acid. To obtain it pure, it must be digested with fused chloride of calcium and re-distilled once or twice. After several rectifications, and by cooling slowly, it can be obtained in a solid colorless crystalline mass.

The pure acid has an odor resembling creasote; the specific gravity = 1.065. It burns with a reddish flame; boils between 187° and 188° . It does not redden litmus, only making an oily stain on the paper. It is soluble to some extent in water, but is very soluble in alcohol, ether, and acetic acid, as well as in glycerine and the fixed and volatile oils.

The pure acid acts energetically on the skin. A weak aqueous solution coagulates albumen and the blood, and acts as a strong

antiseptic. Putrid meat and fish, faecal matters and fermented urine instantly lose their disgusting odor, when immersed in or treated with the solution.

Chemically, phenic acid is a weak acid. It combines with metallic oxides, but the salts have little stability; carbonic acid decomposes them. Those with an alkaline base have always an alkaline reaction.

In consequence of the supposed little solubility of carbolic acid in water, it has hitherto been chiefly employed mixed with powders, as in the case of Smith and McDougall's disinfecting powder; but the author of these papers has by careful experiments determined that the pure acid is sufficiently soluble in water for the solution to possess the power of coagulating albumen, of arresting or preventing spontaneous fermentation, and consequently of destroying infection. The saturated solution acts also on plants and the lower animals as a violent poison, though containing but five per cent. of the acid. The solubility of the acid may be considerably increased by the addition of from five to ten per cent. of alcohol or of acetic acid.

From the experiments which the author has made on the action of phenic acid on plants and animals, it appears that a very weak solution will instantly destroy the lowest forms of animal and vegetable life. The juices of vegetables are prevented from becoming mouldy by the addition of the smallest quantity of the acid. Herbs and shrubs watered by a stronger solution rapidly die.

The microscopic beings concerned in the production of putrefactive fermentation are as quickly destroyed by a weak solution, and the putrefaction is completely arrested. Parasitic and earth-worms also are easily killed by a solution containing one half per cent., or by exposure to air containing but a small proportion of the acid. An injection of water containing one half per cent of the acid brought away from a child a large quantity of *ascarides lumbricoides*, all dead. A stronger solution kills the eggs of ants and earwigs, and larvæ of butterflies, caterpillars, &c.

The author has studied the action of the acid on the mammalia with mice, guinea-pigs, dogs and horses, as well as men.

Action on the Human Skin.—Immediately after the application of a thin coating of the pure acid, a sharp smarting is felt, which lasts about an hour. The epidermis becomes wrinkled, and in a short time the formation of a white body may be remarked wherever the acid has touched. This white coloration results from the action of the acid on albumen; it disappears by degrees, and is replaced by some congestion, which lasts about twenty days. This congestion presents all the characters of an intense inflammation, being attended with redness, heat, and swelling. If a small piece of the epidermis (which appears raised as in a blister) be stripped off, no serum escapes. The epidermis becomes detached by degrees, and

when the exfoliation is complete a brown spot remains, which testifies for a long time to the energetic action of the acid. After a number of experiments on his own arms, and the arms of his friends, M. Lemaire assures us that the smarting never lasts longer than an hour. The redness of the skin endures about twenty days, but the inflammation never extends beyond the part to which the acid has been applied.

Action on the Mucous Membrane.—The action of the pure acid on the mucous membrane is, of course, analogous to its action on the skin; acute smarting, shrivelling up of the epithelium, and a milky coloration being observed. The smarting does not last so long as on the skin, especially on such membranes as produce an abundant secretion; and the epithelium quickly returns to its normal condition.

Action on the Respiratory Organs.—From experiments on mice and horses, the author concludes that the higher animals may breathe the diluted vapor of the acid for a long time without discomfort or danger.

Mode of Action.—The general fact resulting from the author's experiments is that phenic acid acts on plants and lower animals as a violent poison.

When the action of the acid on a semi-transparent leaf is examined, it is easy to prove that it coagulates albumen, and that the parenchyma and epiderm are contracted. This explains how it is that microphytes and microzoons die so quickly in its presence. All animals with a naked skin, and those which live in the water, die sooner than those which live in the air and have a solid envelope. The difference appears to result from the power of absorption, which is much greater in the former than the latter.

When frogs are placed in a saturated solution (5 per cent.) of the acid, the skin shrivels and becomes milky from the coagulation of the albumen. The branchiæ of fishes also become white. This coagulation of albumen led the author to suppose that the death of the animals resulted from the coagulation of their blood. To verify this supposition, he examined, under the microscope, the action of the acid on the branchiæ of the larvæ of salamanders, in which the circulation of the blood is easily seen. He then observed that, although the solution arrested the circulation instantaneously, it altered neither the form nor appearance of the blood globules. All the change consisted in their immobility. When the blood is coagulated by mineral acids the form of the globules is changed. With carbonic acid nothing of the kind takes place. Besides this, a post-mortem examination of a dog and horse proved that the blood was not coagulated. Phenic acid, then, does not kill by producing coagulation of the blood! Its action on the blood globules, however, leads M. Lemaire to think that these globules are living beings.

Insects exposed to a weak dose of the acid become asphyxiated, but they soon recover in pure air.

When a gramme or two dissolved in water are administered to a dog, the animal falls as if struck with lightning, but soon recovers again. The sudden fall the author ascribes to violent pain, and the rapidity with which it is absorbed and carried to the nervous centres. It is on the nervous system, then, that phenic acid principally acts.—*Chemical News.*

Bibliographical Notices.

The Physician's Handbook of Practice for 1864. By WILLIAM ELMER, M.D. New York: W. A. Townsend, publisher.

WE have carried this Visiting List for several years, and have found it in many respects better adapted to the wants of the practitioner than any other we have seen. The list of remedial agents, combining as it does in a compact form nearly all the preparations ever employed in medicine, is particularly valuable, affording to its bearer opportune information concerning the dose of any drug he may wish to prescribe, which may have escaped his memory. We are pleased to see that there has been added in this edition an index of the common names of the articles of the *materia medica*, for in previous years certain important agents have been arranged according to their little used generic names, so that one wishing to refer to ipecac. or belladonna, for instance, might think they were omitted unless it had occurred to him to look for cephaelis and atropa. We cannot help thinking, however, that the list of agents given, which amounts to 689, and bears too close a resemblance to the *materia medica* of some botanical doctor, might be reduced with advantage one half at least in number. What is wanted in a pocket-book is simply what is well known, not matter to be tested by experiment.

With the exception of the substitution of another "ready method" in asphyxia for that of Marshall Hall, the contents of the volume remain the same as in former years. We heartily recommend it to every practising physician.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 3, 1863.

MENTAL HYGIENE.*—"Canst thou not minister to a mind diseased?" is a question which sooner or later is sure to be addressed to every physician of extended experience; and it is a matter of sincere satisfaction that through the unwearied and philanthropic efforts of the students of mental disorder at the present day he is enabled to give so often a much more encouraging reply than that which pro-

* Mental Hygiene. By I. Ray, M.D. Boston: Ticknor & Fields. 1863.

voked the impatient exclamation of the disappointed murderer and usurper, "throw physic to the dogs, I'll none of it!" In no department of professional research have the labors of our brethren been crowned with a richer harvest than in that which has for its study the prevention and cure of diseases of the mind. To no class of physicians is the community under greater obligation than to the self-denying men who assume the responsible position of head of our asylums for the treatment of this distressing class of disorders. The position is one as trying as it is responsible, demanding rare qualities of mind and heart in the man who assumes its burdens. Practically familiar as we all are with the blessed results which so often flow from their agency, we are always prepared to listen with interest and respect to any words of warning or advice which may fall from their lips, touching the dread maladies which are the subject of their constant observation and care. It is with these feelings that we have taken up Dr. Ray's modest little book, and have found it so full of interest and practical wisdom that we hardly knew how to lay it down until we had read it from beginning to end. It is not offered by the author as a complete system of Mental Hygiene; it is only intended "to expose the mischievous effects of many practices and customs prevalent in modern society, and to present some practical suggestions relative to the attainment of mental soundness and vigor." Standing aloof, as it were, from the busy whirl of our social life, the author can look about him with a philosophic calmness, and detect the peculiar tendencies and subtle influences which are at work to undermine the delicate organization of the human intellect, so that he can speak with an authority almost oracular of their baneful influence. His words of warning are addressed quite as much to the community at large as to the professional reader, and well will it be if they gain respectful audience. Like all great truths, such warnings must be uttered over and over again by different mouths, as successive generations of listeners come upon the stage, constantly bringing forward those to hear to whom they come with all the freshness of novelty. We all know how much depends upon the manner in which a truth is enunciated, to gain for it a hearing, so that we are almost tempted at times to exalt the manner at least to a level with the matter. In the treatise before us we find a happy illustration of the truth of this. The author lays before his readers the thoroughly established facts of Medical Psychology in such an attractive way, that entire conviction reaches where the same truth in a less engaging form would have had but little chance of being heard.

The work before us is divided into five chapters, on Mental Hygiene, as affected by Cerebral Conditions—by Physical Influences—by Mental Conditions and Influences—by the Practices of the Times, and by Tendency to Disease.

The first chapter, on the effect of cerebral conditions upon the mind, treats the subject, so to speak, in its organic relations. The author discusses with much wisdom the relations of the mind to the brain, its organ, avoiding the extremes of materialism on the one hand and extravagant theories of the independence of the intellect upon bodily organization on the other.

"As the music is in the player," he says, "not in the instrument he uses, so is the brain the material organ by which the mind is enabled to exercise its pow-

ers. On the other hand, among men whose views on philosophical subjects are determined more by the testimony of sense than any subtle deductions of reason, there are some who regard the mind as entirely a function of the brain. Without the brain there is, and there can be, no mind. This question, as already hinted, derives its importance chiefly from its theological bearings. If the mind is an original, independent principle having only an incidental connection with the body, then, it is supposed, it may, and indeed must exist after the dissolution of the body. But, if it is merely a phenomenon resulting from the play of organic elements, it must necessarily perish with the organism from which it sprung. It is not quite certain that either of these views will warrant the inference that is drawn from it. Although we may admit the independent existence of the mind, there must be other reasons, I apprehend, for believing it to be immortal; and, though we admit that the mind is a product of vital movements, it does not necessarily follow that there can be no conscious existence after the component parts of the animal mechanism are dispersed. We are not to measure the resources of Almighty Power by our own feeble conceptions, nor to suppose that a fact is impossible merely because some of its conditions are beyond our comprehension."

The close connection of the brain with the mind, and the various influences which act upon the latter through the physical condition of the former, are considered by the author; and, believing in the possibility of hereditary transmission of mental qualities, Dr. Ray does not believe in the indefinite progressive development of any special traits, but thinks the world will look in vain for any higher types of mind than it has already seen. Nevertheless, he does not undervalue the great importance of studying these laws of hereditary transmission, and of acting under their guidance. In reflecting upon them he remarks as follows:—

"Now, what we seek for as the proper result and aim of mental cultivation is, not a particular endowment that may be transmitted from one generation to another, but a large range of capacity, great facility of achievement, and great power of endurance. That these qualities may be rendered permanent by a faithful compliance with the laws of breeding, there can scarcely be a doubt; but this, it must be observed, is something very far short of indefinite development. We have no reason to suppose that, by any possible scheme of training and breeding, finer specimens of the race can be obtained than Pericles and Alcibiades; but we are warranted in believing that by this means individuals of distinguished general excellence would be far more common. If it be true, then, that, in the various stages of its progress, the mind, like the body, is under the government of inflexible laws, it follows that these laws should be thoroughly understood, in order to obtain the highest possible degree of mental efficiency. To show exactly what they are, to exhibit the consequences that flow from obeying or disobeying them, is the essential object of Mental Hygiene, which may be defined as the art of preserving the health of the mind against all the incidents and influences calculated to deteriorate its qualities, impair its energies, or derange its movements. The management of the bodily powers in regard to exercise, rest, food, clothing and climate; the laws of breeding, the government of the passions, the sympathy with current emotions and opinions, the discipline of the intellect—all come within the province of mental hygiene."

Believing fully in the power of such agencies in shaping the mental development, after considering the subject of hereditary transmission, the author utters the following earnest words of warning.

"To those who are yet to form the most important of all connections in life, the facts here stated speak in tones of solemn admonition, warning them, by all their hopes of domestic happiness, against disregarding a law which carries with it such fearful penalties. The highest mental and personal accomplishments will prove to be no compensation for the evil; nor will they furnish any excuse for compromising the welfare of those who derive from us their existence. None but

they who have a professional acquaintance with the subject can conceive of the amount of wretchedness in the world produced by this single cause. None can adequately estimate the suffering, the privation, the ruined hopes, the crushed affections, the blighted prospects, that may be fairly numbered among its effects."

In reply to those who do not accept the doctrine of hereditary transmission, Dr. Ray says:—

"Against the doctrine of the hereditary character of some diseases, it is objected that the legitimate effect of such an organic law would be to deteriorate the human constitution, until every trace of its original stamina shall have disappeared. Of course, the same disease is often seen in both parent and child, but this is regarded as only a casual coincidence. This objection is founded upon a very incorrect idea of the laws of hereditary transmission, as might be inferred from the statement at the close of the last paragraph. The transmission of disease is modified by the same class of agencies as the transmission of feature, or temperament, or complexion. We have no more right to expect that the insanity, or scrofula, or hare-lip of the parent should be transmitted to every one of his children, than we have to expect that a prominent chin, or a large frame, or a dark complexion should be thus transmitted. The tendency, already spoken of, to regain the normal type after the most considerable deviations, is even more obvious in the case of disease and anomalous formation than in that of ordinary peculiarities. Besides, we are to recollect that it is not necessarily the disease which is transmitted, but only the predisposition to disease, and this, owing to some fortunate conjunction of circumstances, may never be developed into overt disease. Two brothers, for instance, may have inherited a tendency to insanity. One is exposed to circumstances that try the mental energies beyond the power of endurance, and he becomes insane. The other pursues the voyage of life on a tranquil sea, with favoring gales, and thus avoids altogether the impending blow. True, instances where the disease of the child has apparently been derived from the parent, may be perhaps outnumbered by those where there has obviously been no such transmission. But this would not help the objection, unless we alleged that the diseases in question had no other origin than that of hereditary transmission. They may be derived from the parent, or from agencies that supervened subsequent to birth. These two different orders of fact are not incompatible, as all the analogies of nature show. To deny the hereditary character of some diseases, merely because they are not always hereditary, is no better philosophy than it would be to believe that scarlatina, typhus, measles, glanders, are never contagious, because by the side of cases which seem to have originated in contagion are many that cannot be traced to this cause."

The author recognizes the hereditary taint by signs which do not always receive their just interpretation.

"The current philosophy," he says, "can recognize the evidence of transmission in no shape less demonstrative than delusion or raving. Contrary to all analogy and contrary to all fact, it supposes that the hereditary affection must appear in the offspring in precisely the same degree of intensity which it had in the parent. If the son is stricken down with raving mania, like his father before him, then the relation of cause and effect is obvious enough; but if, on the contrary, the former exhibits only extraordinary outbreaks of passion, remarkable inequalities of spirit and disposition, irrelevant and inappropriate conduct, strange and unaccountable impulses, nothing of this kind is charged to the parental infirmity. Such views are not warranted by the present state of our knowledge respecting the hereditary transmission of disease."

The questions of the transmissibility of mental peculiarities from parent to offspring, and the supposed deterioration of the offspring of intermarriage between blood relations, both of which had got to be generally received as settled questions by the world at large, have been of late re-opened with considerable earnestness by those who be-

lieve in neither. Our author, as might be expected, does not go with them. Of the latter of these questions, he says:—

“A not infrequent cause of mental deterioration is the intermarriage of blood relations. The great physiological law, that like produces like, depends upon this condition, that the parents shall not be nearly allied by blood. In the domestic animals, neglect of this condition is soon followed by deterioration, and if continued through several generations, the original good qualities of the breed disappear altogether. In man this effect is less obvious, parties often escaping any apparent penalty, even when the law is violated in two successive generations. But it is common enough and severe enough to render infractions of the law fearfully hazardous. Its existence has been denied on the strength of some limited statistics, but the stern facts on the subject are too numerous to be accidental, and it must be our own fault if we do not heed the lesson which they teach. Because the physical qualities of the parents are occasionally too prominent and too well established to be materially vitiated by a single infringement of the law, and the first impression is not enforced and reduplicated by repetitions of the infringement, men are disposed to believe that they have committed no transgression!

“Within a few years past, the physiological effects upon the offspring, of marriages in consanguinity, have been carefully investigated by Devay, Perrin, Menière, and others, in France, and Bemiss and Howe in this country. These inquiries show, among these effects, an extraordinary proportion of disease and imperfection in the shape of insanity, idiocy, epilepsy, blindness, deaf-mutism and sterility. From 24 to 30 per cent. of all the pupils in the institutions of France for deaf mutes are the offspring of such marriages, and many of them left a deaf mute brother or sister at home. Dr. Howe collected the statistics of seventeen marriages in consanguinity, from which it appears that of the ninety-five children which proceeded from them, forty-four were idiots, twelve scrofulous and delicate, one deaf, and one a dwarf. Dr. Bemiss has collected the results of eight hundred and thirty-three consanguineous marriages, reported by himself and others, from which proceeded thirty-nine hundred and forty-two children. Of these, one hundred and forty-five were deaf-mutes, eighty-five blind, three hundred and eight idiotic, thirty-eight insane, sixty epileptic, three hundred scrofulous, ninety-eight deformed, and one hundred defective in one way or another.

“In persons of a feeble capacity, and especially such as have some tendency to disease, the evil in question is more likely to follow; and cases of this kind are not rare in the experience of those much conversant with mental disorders.”

Surely such statistics as those above quoted are unanswerable. In the remainder of this chapter the author illustrates his position by reference to the statistics of insanity in our own New England communities. He shows also what other agencies are at work to undermine the mental vigor of our people, and on the other hand he dwells upon the vast importance of the *corpus sanum* to the *mens sana*, touching upon many of the defects in our social system which are working an evil of fearful magnitude, of which his professional experience gives him a right to speak in a tone of authoritative warning. Our limits compel us to defer our notice of the remainder of this interesting volume to a future occasion.

THE following extract, from the *New York World*, contains so much good sense that we publish it entire:—

“THE EVENING EXCHANGE.—Another great step has been taken in the progress of the age. An ‘Evening Exchange’ has been opened in the heart of the handsomest quarter of the city, to which, after a hastily snatched dinner, crowds of brokers and speculators eagerly hurry, there to resume the transactions of the day and to anticipate those of the morrow. How long it will be before a ‘Sunday Ex-

change' will be established for the purpose of saving to Mammon the invaluable time now wasted, or supposed to be wasted, on the worship of a less palpable divinity, we cannot say; but events move rapidly in these electric days, and the desirable consummation cannot be long delayed.

"When one reflects, indeed, upon the number of hours which must be consumed in the condition of sleep; upon the wear and tear of noble faculties in the emotions of friendship and under the stress of affection; upon the monstrous expense of breath and brain which men who might be selling 'Erie' or buying 'Harlem' are put to in exchanging opinions upon subjects literary, political, moral, artistic, or religious, it is impossible not to be amazed at the vast field of speculation which still remains to be tilled. Vast as it is, however, the energy of our people will soon bring it all under cultivation. The time is not far distant when all the able-bodied male population of this city, not engaged in the vulgar labors by which mere life is supported and carried on, will neither think of, believe in, hope for, nor pray to, any god but the Ormuzd of gold or the Ahriman of greenbacks. How delightful will then be the domestic fireside! Liberated from all control, the young idea will shoot as wildly as it pleases in all imaginable directions. Reduced to these simple functions of the nurse and the housekeeper which so beseeem her retiring nature, the wife will abdicate entirely the preposterous notion of sharing her husband's society, lightening his cares, or partaking in his pleasures. The jargon of Wall street will constitute the only language of the dinner-table and the club; the share-list will take the place of learning and genius, of satire and of song; science will confine itself to taking observations of *Ursa Major*, and wit delight itself in bulls alone. It is possible, certainly, that, in our progress towards this true 'golden age,' individuals, as the poet hath it, 'may wither' and old ideas fade from the checkered scene. We may expect a large development of sporadic lunacy; a considerable accession to the annals of financial crime; possibly a few murders or suicides, such as give zest to the history of Frascati's or Crockford's; certainly an immense number of interesting family scandals, a general loosening of the bonds of honor and honesty, a more profound demoralization, in short, of society in public and in private life.

"But it is ridiculous to carp at the incidents of progress. There can be no doubt that man came into this world exclusively for the purpose of making money. No other animal ever deals in that article, excepting, indeed, an occasional ring-tailed monkey, elevated from his natural place in the scale of animated beings by familiar association with a squinting Savoyard or an odoriferous and organ-grinding Italian. But not even the monkey has ever risen to the point at which a handful of greenbacks can outvie the charms of home, love, repose and self-respect. The 'Evening Exchange' is a final argument of the supremacy of man, not alone over the lower creation, but over his own instincts, passions, traditions and beliefs."

OFFICERS OF THE VERMONT MEDICAL SOCIETY.—President, P. D. Bradford; Vice President, O. F. Fassett; Recording Secretary, J. S. Richmond; Corresponding Secretary, D. R. Storey; Librarian and Treasurer, Charles Clark; Executive Committee, G. B. Bullard, S. Putnam,

E. F. Upham ; Delegates to Burlington Medical College, J. M. Stiles, E. A. Knight ; Delegates to New Hampshire Medical Society, E. A. Knight, C. A. Perry ; Delegates to New York Medical Society, H. Stevens, W. McCollum ; Delegates to Rhode Island Medical Society, G. B. Bullard, W. M. Huntington ; Delegates to Connecticut Medical Society, D. Woodward, C. B. Chandler ; Delegates to Massachusetts Medical Society, C. M. Rublee, Earl Cushman ; Delegates to Maine Medical Society, W. F. Blanchford, N. H. Knowles.

H. G. SPAFFORD, Esq., has resigned the chair of Medical Jurisprudence in the Chicago Medical College, and Dr. M. O. Heydock, of Chicago, has been appointed as his successor.

DR. G. W. NORRIS has tendered his resignation as one of the surgeons of the Pennsylvania Hospital, a post which he has occupied for twenty-seven years.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, NOVEMBER 28th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	47	44	91
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.2	36.4	72.6
Average corrected to increased population	00	00	79.54
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
8	7	2	6	1	1	1	0

NOTICE.—Subscribers in New England who have not paid their subscriptions for the current year, will receive their bills in the present issue of the JOURNAL ; and those out of New England will receive theirs next week. Last December a more than ordinary promptness was shown by subscribers in responding to this annual call, and it is trusted that the same early attention will be given to it the present year. Some accounts of long standing still remain unsettled on our books, which it is hoped will also be promptly attended to.

BOOKS RECEIVED.—Outlines of the Chief Camp Diseases of the United States Armies as observed during the present War. A Practical Contribution to Military Medicine. By Joseph Janvier Woodward, M.D., Asst. Surgeon U.S.A., Member of the Academy of Natural Sciences of Philadelphia, &c. Philadelphia: J. B. Lippincott & Co. 1863.

MARRIED,—In Cambridge, Dr. Forest Spafford, of Belmont, to Miss Mary A. Smith, of C.—In Bangor, Me., Nov. 19th, Dr. A. D. Crabtree, of Hartford, Conn., to Miss Annie E. M. Kenney, of Bangor.

DIED,—In South Abington, Nov. 19th, Dr. C. H. Haskell, son of Dr. Joseph Haskell, of Rochester, aged 30 years.

DEATHS IN BOSTON for the week ending Saturday noon, Nov. 28th, 91. Males, 47—Females, 44.—Accident, 4—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 2—bronchitis, 4—cancer, 3—choked (by a piece of meat), 1—consumption, 8—convulsions, 2—croup, 7—debility, 2—diphtheria, 5—dropsy, 4—drowned, 2—dysentery, 1—erysipelas, 1—scarlet fever, 2—typhoid fever, 1—gastritis, 1—hæmorrhage (of umbilicus), 1—disease of the heart, 6—malformation of the heart, 1—infantile disease, 3—intemperance, 1—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 1—old age, 5—paralysis, 1—pleurisy, 2—premature birth, 2—smallpox, 1—tonsillitis, 1—tumor, 1—unknown, 5.

Under 5 years of age, 34—between 5 and 20 years, 5—between 20 and 40 years, 13—between 40 and 60 years, 21—above 60 years, 18. Born in the United States, 54—Ireland, 30—other places, 7.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXIX.

THURSDAY, DECEMBER 10, 1863.

No. 19.

SURGICAL CASES.

[Communicated for the Boston Medical and Surgical Journal.]

Records of Cases admitted into the Surgical Wards of the West Wing of the Massachusetts General Hospital, under the care of Dr. R. M. HODGES, during the four months preceding Nov. 1, 1863; by S. W. LANGMAID, Surgical House-pupil. (Concluded from p. 357.)

HERNIA.

I.—SEPT. 14th. Female, aged 46. Ruptured many years ago, during a difficult labor. Generally able to replace the protrusion, but has had to call in a surgeon once or twice, and on one occasion it was thought that an operation would be necessary. One week ago, the hernia came down and has not yet been returned. Unsuccessful attempts at reduction by taxis have been made by several physicians, once while under the influence of ether. Has taken cathartic medicine without effect. An injection, two days ago, brought away a small quantity of liquid fæces. Has had, during the week, severe pain in the bowels and vomiting. Now, pulse feeble; expression pinched; abdomen swollen and tympanitic; frequent vomiting. A kidney-shaped tumor exists in right groin, below Poupart's ligament, the size of an egg. In view of the length of time which strangulation had now lasted, the operation by opening the sac was performed without attempting any renewed efforts at taxis. The stricture existed, apparently, at Gimbernat's ligament. The knuckle of intestine contained in the sac was purple and coated with a thin layer of lymph; it was easily returned. The patient was ordered an ounce of brandy and fifteen drops of laudanum, to be repeated, if necessary, and the laudanum increased if there should be much distress.

Sept. 15th.—Five or six dark-colored, offensive dejections this A.M. But little pain; pulse rapid and patient quite weak.

16th.—Much the same. Broth for diet.

17th.—Much pain in passing water. Bowels but little swollen. Enema of warm water.

18th.—Enema brought away but a small amount of fæcal matter.

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Complains of pain at epigastrium. Fluid extract of senna, 3 ij., every four hours till it operates. Milk punch.

19th.—Four offensive dejections from medicine. Sutures removed from wound. Poultice.

20th.—Tongue red and dry. Wound looks unhealthy.

22d.—Large discharge of faecal matter from wound. Urine bloody. Triple phosphate calculus, size of small pea, with very sharp angles, discharged with urine. McMunn's elixir of opium, gtts. xx., *p. r. n.*

27th.—No dejection since 19th. To have an aloetic enema.

28th.—Enema brought away a large quantity of scybala. Pulse less rapid. Discharge from wound less.

Oct. 2d.—Discharge from wound mixed with dark-colored matter, without faecal odor.

5th–13th.—Bowels loose, with considerable pain, for which powders of bismuth and opium were given.

15th.—Wound entirely healed.

18th.—Bowels costive.

22d.—Sitting up. Takes ale.

24th.—Walks about.

27th.—Discharged, well.

II.—Oct. 1st. Male, aged 24. Direct inguinal hernia of eighteen months' standing. Ring admits the end of the thumb. Mr. Wood's operation for the radical cure of hernia, which consists in bringing the pillars of the ring together by twisted silver wire, and at the same time invaginates a portion of the scrotal fascia, was performed on the 3d; the wires were removed on the 13th, and the patient was discharged Oct. 29th, wearing an annular truss-pad, made of boxwood, with directions to report again in three or four months, when it is hoped the ring will be permanently obliterated and the cicatrix sufficiently resistant to allow the patient to abandon the wearing of artificial support.

Remarks.—Instances of recovery after the discharge of faecal matter from the wound, in cases where a hernia has been operated on, are reported in the books. Mr. Lawrence mentions several such (*Treatise on Hernia*, p. 326). The intestine in this case was not so discolored as to lead to any question as to the propriety of returning it, and it is probable that it underwent changes after it was replaced. The faecal matter discharged was unmistakable in character, although passed in large quantity only upon one occasion. Adhesion probably took place between the intestine and the parietes about the ring, and the rapidity with which final recovery was accomplished is not the least interesting feature of the case.

The operation for the radical cure of hernia performed in Case No. II., gave the patient but little inconvenience or pain. Its result remains to be seen. The annular pad of the truss which was applied was of the form recommended for direct hernia by Mr.

Wood, whose operations have been so successful, and has the advantage of tending rather to contract the ring than to dilate it, as must be the case with a solid convex pad, the greatest pressure of which being at the centre gives it the action of a wedge, distending instead of approximating the edges of the ring. In a case of oblique inguinal hernia the pad, in place of being annular, should have the shape of a narrow horse-shoe; the action of this would be on the sides of the canal, and its tendency to approximate them.

VAGINAL FISTULÆ.

Four operations for vesico-vaginal fistula have been performed. Of these, one was entirely successful; in the other three cases the fistula, although very much improved, so far as reduction in size goes, will still require further interference.

A case of recto-vaginal fistula occurred, which merits mention in brief detail.

Sept. 17th. F., 38. At an early age commenced to have, regularly, once a month, pain in side, with nausea and occasional vomiting. At such times, had a flushed face and feeling of fulness in head. Sometimes noticed a slight swelling of abdomen, which quickly subsided. She has, however, never menstruated, or had indications of vicarious menstruation. Was married about fifteen months ago. Sexual intercourse was found impossible. A physician, to whom she applied for advice, said that he could put matters right by a simple operation for the division of the hymen. This he performed, and ever since the patient's fæces have been wholly passed from the vulva, and in the act of coition the penis passes into the rectum.

On examination, it is found that the vagina formerly terminated in a cul de sac, scarcely one inch in depth, just within the vulva, and that this now communicates with the rectum by a large transverse opening, which allows the passage of two fingers. The external organs are natural. The urethra admits the forefinger, this having been dilated by the patient herself, under the impression that it might be the vagina. The uterus, normally situated, can be felt on introducing the finger into the rectum. No tumor is detected, either in the abdomen on palpation, or in the rectum on exploration.

Sept. 20th.—A transverse incision was made across the fundus of the cul de sac, and three fourths of an inch below the meatus; the septum between the rectum and bladder was then carefully separated, and an artificial vagina opened up to the uterus, the os of which was clearly distinguishable. This was kept dilated by a roll of compresses, smeared with cerate, which was daily changed, and the non-closure of the new vagina further assured by the frequent introduction of the finger. No symptoms of any consequence followed the operation, and on the 31st of September the patient was sitting up.

Oct. 3d, she was walking about.

Oct. 11th.—An operation was performed to close the communication with the rectum. The edges of the cut which had opened the commencement of the original vagina into the rectum were refreshed, and brought together by eight silver sutures. It was a task of some difficulty to do this without bringing the mucous surfaces in contact, the parietes being very thin and the tension on the sutures considerable. The bowels were ordered to be kept constipated.

Oct. 20th.—Five sutures were removed.

23d.—Bowels moved, the dejection being *per anum*, for the first time in fifteen months. Remaining sutures extracted. Examination shows the fistula to be so nearly closed that the extremity of a silver catheter can hardly pass through the remaining orifice.

Nov. 3d.—Discharged, unwilling to undergo a further operation to complete the cure, as she fears she may be prevented reaching her home in Nova Scotia by the approaching winter. She has a vagina which admits two fingers their whole length, and no fæcal matter passes by the vulva. On two occasions since the first operation, there has been a sudden flow of bloody matter, lasting twenty-four hours, resembling that of the catamenia more than anything else, and which could be explained in no very satisfactory manner upon any other supposition than that it was a menstrual discharge.

TENOTOMY.

I.—M., 14. Aggravated talipes equino-varus. Never operated on. Division of the tibialis anticus, posticus, plantar fascia and tendo-Achillis, on both sides. Foot brought into admirable position, and at end of eight days patient is able to take a few steps, bringing the sole of the foot squarely on the ground. Discharged, wearing apparatus, which, in fact, is hardly required.

II.—M., 14. Talipes equino-varus of left foot since nine months of age; attributed to a fall which was thought to have injured patient's back. Oct. 24th, division of tibialis anticus and tendo-Achillis. Nov. 3d, walks on sole of foot and wears an ordinary shoe. Discharged, well.

III.—M., 1 year old. Talipes equino-varus. Has been operated on before. Division of tendo-Achillis. Is just beginning to walk, and now gains rapidly. Discharged, twelve days after operation, wearing apparatus, but with foot entirely redressed to a natural position.

IV.—F., 12. Varus of left foot, dependent on spina bifida of upper lumbar vertebræ. Tendons of the tibialis anticus and gastrocnemius divided, but the low degree of vitality, showing itself by ulceration wherever the least pressure has been made, either in walking or by an apparatus, interferes with the application of any orthopædic shoe. At the end of thirty-five days, patient was dis-

charged, with the foot much improved in shape, and able to walk enough on the sole to relieve the side of the foot, which is the seat of extensive ulceration from pressure in walking prior to the operation. While under ether, examination of the tumor of the spina bifida revealed the presence of a needle quite deep under the integument. This was easily pushed through the skin and withdrawn, but the patient is unable to give any account of how it reached the position in which it was found.

V.—M., 5. Congenital equino-varus of both feet. Division of tendo-Achillis and plantar fascia. At end of seventy days from operation discharged, walking squarely and well on soles of feet, and wearing a stout pair of Balmoral shoes.

VI.—M., 18. Congenital wry neck. Sterno-mastoid muscle degenerated into a rounded cord. Its division at the clavicle not permitting the head to be entirely righted, the muscle is further divided near the mastoid process, where it remains contracted, in spite of its division below. The head was brought into position by an apparatus extemporized from adhesive plaster, and at the end of seventeen days the boy was discharged, cured of his deformity.

Remarks.—In none of the cases of operation for club-foot, was apparatus applied until five or six days had elapsed. The tibialis posticus tendon was always divided behind the malleolus, and not just anterior to its insertion into the os scaphoides. With the exception of Case No. II., the deformity was in every instance as great as is ordinarily seen, and in none of the patients, with the exception of No. V., was any excoriation produced by the apparatus. In this case the degree of vitality in the lower extremities was such that spontaneous ulceration had occurred in one foot, without being induced by pressure, the scar of which in contracting had drawn up the little toe so that it stood at right angles to the others. The feet were always cold, and their temperature difficult to raise, either by friction or warm applications. The great timidity and sensitiveness of the patient prevented much from being accomplished by manipulation. Except in this instance, rapid improvement followed the operations, and but a short detention in the Hospital was required.

TUMORS.

I.—M., 18. Tumor under right ear; first noticed five years ago. About an inch in diameter, painless, movable. Integument over tumor natural. Removed July 8th. Discharged July 15th. Microscope shows it to be a glandular hypertrophic growth.

II.—F., 62. Recurrent scirrhus tumor in cicatrix of an operation for extirpation of mammary gland, performed April 2d, 1862. Glands in axilla enlarged. Aug. 18th, removed all traces of the disease. Sept. 10th, discharged, wounds nearly healed.

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III.—F., 19 months. Removal of large nævi on back and abdomen by excision. Wounds healed at end of a fortnight.

IV.—M., 15. Vascular tumor of forehead, size of half an orange. At the age of two years this was not larger than a pea, existing as a small black spot over the right eyebrow. When six years old, an unsuccessful attempt was made to get rid of it by the ligature. Since then it has rapidly increased in size. Removed by excision, the hæmorrhage not being profuse. Tumor consists of erectile tissue, like the corpus cavernosum penis; inflated and dried, the section is very similar to that of the lung when similarly treated. Returned to his home in Maine six days after operation. Wound nearly closed.

V.—F., 35. Scirrhus tumor of breast. Abrasion of nipple four years ago, after birth of child; this never healed. In May last, four months ago, it began to bleed and the breast to enlarge. Has never had much pain. Disseminated scirrhus tubercles in the skin at various points; no enlargement of axillary glands. Entire disease removed. Discharged thirteen days after operation. Wound almost closed.

VI.—M., 23. A soldier, who had served with his regiment up to the battle of Fredericksburg, Dec., 1862, and through all the Peninsular Campaign of Gen. McClellan, entered the Hospital Sept. 22d. Sixteen months ago a tumor began to appear in left parotid region. In January last, this was as large as the fist, and was removed at a U. S. General Hospital in Washington. By the first of May it was as large as before removal, and has continued to grow rapidly ever since. It now extends from the median line in front to the median line behind, and fills out the whole space between the jaw and the clavicle, so that patient's neck is considerably larger round than his head. It is hard, immovable, lobulated, and the integument over it traversed by innumerable varicose veins. In the axilla there are two enlarged glands, and on the right side of the neck is a round, movable tumor, as large as an egg. On inspection of the pharynx, the growth is seen encroaching on the posterior fauces. General health excellent, and patient suffers only from gradually increasing difficulty in swallowing and breathing. This tumor, which was remarkable for its size and rapid growth, was not thought to be amenable to treatment or operation.

VII.—F., 37. Fatty tumor on back of shoulder, as large as two fists; of seven years' growth. Removed. Discharged at end of ten days, wound healed.

GUN-SHOT WOUNDS.

I.—July 14th. M., 42. Shot through forearm, apparently with a musket ball, at the Cooper St. riot. The wound is near the elbow, but the joint does not appear to be implicated, and no bone is fractured.

15th.—Arm swollen and painful. Patient loquacious.

17th.—Totally sleepless; bathed in perspiration; calls himself well; attempts to get out of bed. Is ordered brandy and soup.

18th.—Furiously delirious. Died, suddenly, at 10, A.M.

II.—July 14th. M., 12. Bullet wound in Cooper St. riot. Ball entered left hip, just over great trochanter; emerging at the cleft of the nates, it entered the opposite buttock and came out near its centre, having pursued a nearly transverse course. Introduction of the finger detects a comminuted fracture of the trochanter and tuber ischii. Pulse good, and there has apparently been little loss of blood. The wound of entrance was enlarged and all loose bone removed. The patient was quite feeble after the operation, and brandy and water and beef-tea were administered through the night.

15th.—Bright and cheerful.

16th.—Wound not looking as well; patient restless. Brandy and beef-tea continued. 10, P.M.—Unconscious at times.

17th.—Much weaker. Died at 4, P.M.

III.—July 15th. M., 21. Co. A, 11th Mass. Vols. Wounded at Gettysburg. Fracture of left arm, four inches below shoulder, bullet emerging on back, near lower angle of scapula; suppurating freely. Wound of entrance is enlarged, with great relief to patient. Aug. 3d, discharged, to go to his home in the country.

IV.—Sept. 30th. M., 20. Bullet wound through the crest of the ilium, received at Cedar Mountain. Two or three fragments of necrosed bone removed.

V.—Oct. 29th. M., 20. A substitute, in attempting to escape, was shot in the back of the neck, a ball and three buck shot taking effect. The ball emerged in the cheek, near the angle of the mouth. Nearly the whole right half of the jaw was comminuted, and the fragments were removed piece-meal. No great amount of hæmorrhage.

Nov. 1st.—Doing well.

VI.—M., 24. Extraction of half a bullet from below the malar bone. Wound received at Antietam, and the bullet supposed to have been then removed by a rebel surgeon. Recovered.

VII.—M., 21. Extraction of Minié bullet from abdominal parietes. Wound received at Gettysburg. Recovered.

VIII.—M., 26. Extraction of small pistol bullet from wrist. Wound received by accident. Recovered.

Remarks.—Cases I., II., V. and VIII. were recent wounds, the patients being admitted within an hour or two of their occurrence. The subject of Case No. I. was an habitually intemperate man, and there is nothing unusual in the fact that delirium tremens, following a wound of even no greater gravity than existed, should have proved fatal. The immediate cause of death in Case No. II. is not as easily explained. The shock passed off, and exhaustion had hardly had time to produce a fatal result. Although the whole extensive track of the wound was sloughy, suppuration had barely commenced. It is probable that the impression produced on the

nervous system at the time of the injury, and subsequently by the inflammation set up, induced the comatose condition in which the patient finally died.

FLESH WOUNDS.

Four patients entered the Hospital with extensive flesh wounds. One of these, a man run over by a horse-car, was so severely injured that he died within 48 hours. Another, assaulted in the street and stabbed in the neck, in whom the common carotid artery was tied, died from a retro-pharyngeal abscess, starting from the bottom of the stab, which penetrated to the spine and implicated the body of the seventh cervical vertebra. The case was reported in detail in this JOURNAL, Sept. 3, 1863, p. 98. Two other patients remained in the Hospital Nov. 1st, their wounds slowly granulating.

BURNS.

Six individuals, with extensive burns, were treated by the application of thick mucilage, rendered pliable and elastic by the addition of a little molasses. One of these cases, in which the whole body was denuded of cuticle by the explosion of a steam-boiler, proved fatal about eighteen hours after the occurrence.

ULCERS.

Eight patients were treated for ulcers of the leg, chiefly varicose. In only one instance was an operation practised for the obliteration of the veins. This was attempted by the injection of a few drops of diluted perchloride of iron. The first operation was very successful; a second, on another vein, was much less so. An abscess followed at the seat of the injection, accompanied by an unhealthy, inflamed condition of the soft parts immediately surrounding it; this slowly disappeared, and was prone to be aggravated by everything attempted to expedite the process of cure. The final result of the case was satisfactory.

ABSCESSSES.

Six patients with abscesses were under treatment, all of which were opened. One of these cases was that of a female, aged 22, who, one week before entrance, after a hard day's work, felt a pain in her left knee. It began to swell, and six hours after she was obliged to go to bed, from which she has not been able to rise, unassisted, since. She is now feeble, has a small pulse and no appetite. The left knee is swollen, being four inches more in circumference than the other, and the seat of a fluctuation, which extends all round the joint, but evidently not connected with its cavity. Two days after entrance it had increased in size, and there was much distension. It was then opened on each side of the articulation by a free incision, and an enormous quantity of healthy pus evacuated. Three weeks after her admission she was discharged, perfectly well.

A little girl, aged 11, entered with an abscess in the middle of the back, at the side of the spinous processes. It was as large as the palm of the hand, not inflamed, not painful, and was of two months' duration. It followed a blow from a fall on the scraper of a door-step. The vertebræ in its immediate vicinity seemed a little prominent, and the question of its connection with disease of the bones was discussed. A subcutaneous opening drew off a quantity of perfectly healthy pus, too healthy to be dependent on disease of the bone, and the abscess was therefore freely incised; smart constitutional symptoms followed for a day or two, but at the end of twenty-four days the patient was well enough to be discharged. When the patient left, the apparent prominence of the vertebræ had disappeared, and the abscess was nearly healed.

DISEASES OF THE RECTUM.

Two cases of hæmorrhoidal tumors were successfully treated by ligature and the application of nitric acid combined, and in one, where the disease was recent and acute, the tumor was incised and the coagulum turned out. All of these patients were discharged well.

Five patients were operated on for *fistula in ano*. All of them left the Hospital doing well, but without the wounds being entirely healed.

DISEASES OF THE GENITO-URINARY ORGANS.

Five cases of organic stricture of the urethra were treated; three by gradual dilatation, one by Mr. Holt's instrument for immediate dilatation, and in one perineal section was performed. In but a single instance was there a retention of urine at the time of admission. In that case a No. 1 elastic catheter was introduced after long and patient manipulation, whilst the patient was in a warm bath; the stricture subsequently yielded rapidly to larger and larger instruments. The use of Mr. Holt's instrument requires previous dilatation of the urethra up to the admission of a No. 4; when this point is reached the great difficulties of a case of stricture are generally overcome. In the instance in which it was used, no inconvenience, beyond a little soreness, followed the abrupt distension of the canal. In the case of perineal section, the patient had been for one year the subject of a traumatic stricture. The operation was performed July 12th, without an instrument in the urethra as a guide. The stricture was about one half an inch in length and seated in the bulbous portion of the urethra.

July 14th.—The catheter was removed and re-introduced once daily, without difficulty.

19th.—No urine flows by the wound or urethra; this was drawn off at intervals.

20th.—Has high fever and frequent chills. Was ordered two grains of quinine and fifteen drops of laudanum, three times a day.

24th.—Fever continues, and there is now great yellowness of the skin.

26th.—Yellowness increased; urine very dark colored.

28th.—Delirious.

30th.—Died. No autopsy was allowed, but a dissection of the perinæum revealed the existence of a large abscess surrounding the neck of the bladder.

Two adult patients were operated on for phymosis.

Two cases of chronic cystitis slowly improved under a varying treatment.

One patient with a syphilitic enlargement of the testis, complicated with hydrocele, was much relieved by the removal of the hydrocele, and left to continue constitutional treatment outside the Hospital.

MISCELLANEOUS CASES.

Ten patients were admitted for contusions and sprains of sufficient severity to require them to rest for a few days, or a week or two.

Three patients with bad felons, which were freely incised, were admitted from among the out-patients.

The operation for double hare-lip was performed on a child six weeks old.

Tracheotomy, for the impaction of a bean in the right primary bronchus, was performed upon a child two years old, without accomplishing the removal of the foreign body. Death ensued, from pneumonia, six hours after the operation. The case is reported in this Journal, Nov. 12, 1863, p. 298.

A patient with paralysis, from injury to the spine; another with crushed toes, and a little girl with a needle beneath the integument at the side of the patella, were also admitted.

NEW DIAGNOSTIC AND PROGNOSTIC SYMPTOMS OF TYPHOID FEVER, DRAWN FROM THE CHEMICAL EXAMINATION OF THE URINE.

[Translated for the Boston Med. and Surg. Journal from the *Revue Médicale Française et Étrangère*.]

FOR two years Professor Primavera, in connection with M. F. Prudente, director of the Medical Clinic at Naples, has been making analytic researches in different diseases, with special reference to the chlorides, the phosphates and the urates. These repeated investigations have enabled them to deduce many laws with regard to the variations in these elements, which, if they are confirmed by other observers, may be of great service in practical medicine, and for this reason are worthy of being brought to the notice of the profession.

1. The complete absence of the chlorides from the urine is a pa-

thognomonic diagnostic sign of typhoid fever. This valuable sign will serve to distinguish this fever from a simple and benignant fever, continuous or intermittent, in which the urine always contains an appreciable quantity of salts of this nature.

2. Urine passed during the ascending period, or even during the whole course of typhoid fever, when this has a fatal issue, shows not only an entire absence of the chlorides, but even a very considerable diminution of the phosphates and urates.

3. The first step towards convalescence is indicated, better than by any other sign, by a rapid and very sensible increase of the phosphates.

4. The second phase of amelioration is shown by an analogous increase of the urates.

5. Finally, the re-appearance of the chlorides in the urine, however tardy, definitely indicates the recovery of the patient.

It is important to remark here, that ocular inspection is not always enough to calculate approximatively the quantity of the urates; for although it is the fact that these salts, when they are in excess, are precipitated by cooling, and reveal their presence by making the urine turbid, or by throwing down a brick-dust deposit, it very often happens, also, that they remain in solution, owing to the presence of an alkaline bibasic phosphate which accompanies them. In this case it is sufficient, after cooling, to pour a few drops of acid into the urine, to see a large quantity of this liquid rendered turbid and thick from a copious precipitate of urates. Now as this precipitate resembles very much that which nitric acid produces in albuminous urine, M. Primavera advises in this case to employ acetic acid and not nitric, which precipitates both urates and albumen. It is also very probable, he adds, that the albumen often found in the urine of typhoid patients by certain practitioners who use nitric acid to the exclusion of all other re-agents, is in reality nothing but urates.

TREATMENT OF THE ASTHMATIC PAROXYSM BY FULL DOSES OF ALCOHOL.

BY HYDE SALTER, M.D., F.R.S., F.R.C.P., &c.

IN my work on Asthma, I state that I think the best diet for most asthmatics is one from which any form of alcohol whatever is carefully excluded. I still adhere to this opinion. I still think that, "unless there is some special reason to the contrary, water is the best accompaniment to an asthmatic's dinner;" that "in ordinary asthma stimulus of any kind is objectionable;" that "heavy malt liquors, especially those containing a good deal of carbonic acid gas, as bottled stout and Scotch ale, are of all drinks the worst for asthma." But since the publication of my book I have seen some cases which

have shown me—what I was unacquainted with at that time—the wonderful power that alcohol possesses, in some cases, of abolishing or preventing bronchial spasm. Its efficacy is such as to give it, in my opinion, a high place among the remedies for asthma.

The first case that brought this before my attention was that of a Scotch lady, who consulted me in May, 1862. She was 55 years of age, and had had her asthma for thirty years. She had been under the care of many physicians, but all the ordinary remedies of asthma had completely failed. The following is a list of some of the things she had tried, and their results, as I have recorded them in the notes I took at the time: “Nitre-paper—no good; ethers—no good; stramonium, in pills—no good; strong coffee—no good; lobelia—no good; chlorodyne—headache, no relief; emetics—no good.” But there was one remedy to which this otherwise uniformly unfavorable verdict did not apply, and that was, whiskey. For some time past this lady had been in the habit of taking this stimulus (how long I do not remember), and it had never failed. She took it with hot water, and began with much smaller doses than she ultimately reached; but at the time I saw her she would frequently take three doses, in rapid succession, of an ounce of Scotch whiskey each, very little diluted. Her sister told me it sometimes produced a very decided effect upon her—I mean, that it decidedly affected her head. It was a great distress to her to have to resort to such a remedy, and in such doses; but, as she said to me, what could she do? She could not go on in such horrible sufferings, knowing that she had immediate relief at her command; and nothing else reached her symptoms, while this never failed, let the paroxysm be as bad as it might. It was merely a question of quantity: if the spasm was very severe, she required more; if it was slight, less would do; but if the whiskey was only pushed far enough, the asthma could never withstand it. I saw her three or four times, but with the uniform result of all the remedies that I suggested failing; and she left my care, as she came under it, with whiskey the sole remedy of her disease.

The second case was also that of a lady, 45 years old, who had suffered from asthma fourteen years, and had tried literally *everything*—nitre-paper, emetics, stramonium-smoking, tobacco-smoking, chlorodyne, chloroform, ether, hyoseyamus, ipecacuanha, squill, strong coffee, iodide of potassium, tonics, &c., with hardly any benefit. She was recommended by a lady with whom she was residing to try gin, as it was “very good for asthma,” and she asked my consent, which of course I gave her, and she took a dose—two teaspoonfuls in a wineglass of water. The effect was immediate, and the relief complete. From that time she resorted to it under all circumstances, and always with the same result. No remedy that she had ever tried had produced such effects. The dose gradually increased, and the frequency of taking it also increased, till instead of taking

two teaspoonfuls she would take two wineglassfuls; a smaller dose would not do. Sometimes she would take this as much as three times in the twenty-four hours. I have seen her decidedly under the influence of alcohol. She herself had a great horror of it, and used to try to do without it, but nothing else would give her relief; and, after trying other things in vain, she would be at last compelled to resort to this her disagreeable, but always efficacious, remedy. In the autumn of 1862, I sent her to Malaga, to escape the bronchitis which had nearly killed her the winter before, and she was able there to leave off the gin. But, on returning to this country in May, 1863, she found she was obliged to take to her gin again. She has never found it do her any harm. It has a strong diuretic effect; but the relief does not depend upon this, as it is immediate, and long before the kidneys begin to act. The gin, she says, produces no exhilaration, but a sort of stupor; and, from this circumstance, she thinks that it acts as a sort of sedative, and relieves the asthma by this property. She always takes it with water as hot as she can bear it. If she took it with cold water, she thinks she might take any quantity, and that it would do her no good; for if she lets it stand till it is cool, and then takes it, it is useless. If, too, she takes it when suffering from bronchitis as well as asthma, or when the asthma is due to cold on the chest, it gives either very imperfect relief, or none whatever.

The third case is that of a gentleman at the present time under my care. I think I may say without exaggeration that his case is the most severe I have ever witnessed. I have never seen or heard of spasms so violent, or that seemed to threaten so nearly to put life in peril. His most intense spasms he calls "screaming spasms," from the strangling cries that the want of breath compels him to make. At the time of which I am speaking, he lived in the same street with myself, and though his house was half the length of the street from mine, his nurse has often assured me that if the doors had been open I could have heard his screams in my house at night. His case was as much characterized by intractability as severity. I may simply say that *everything* had been tried, and that nothing did him any good worth speaking of. The only thing that gave him any relief was chloroform, and that only lasted as long as he was under its influence; as he emerged from the state of unconsciousness, the spasm returned. All other remedies failed absolutely.

One day his nurse, who had seen benefit derived from hot spirit-and-water in the case of an asthmatic lady on whom she had attended, recommended him to try it. He was at first afraid to do so, thinking it could do him no good, and might possibly do him harm. He, however, took some, and was at once relieved by it. He was so convinced of the relief it gave him, that when, a few hours after, the difficulty of breathing was coming on again, he again resorted to it, and with like effect. He took it again and again, each time to

meet the spasm, and each time with the same result; the spasm stopped almost as soon as the brandy-and-water was swallowed. It was made very strong and hot—two thirds brandy and one third boiling water. In this way he took a quart of brandy in the first twenty-four hours that he tried it (at least so his nurse afterwards assured me), and went on in that way for two months, during which time he took twelve gallons of brandy. The spasms were so fearful and the relief so complete, that I gave my consent to this treatment, although I was appalled by the quantity of brandy he was taking. Indeed, I think that no prohibition of mine, if I had thought it right to prohibit it, would have been of any avail, so eagerly did the poor man cling to anything that gave him relief. On many occasions, the nurse has told me, he became quite intoxicated, but he was so imperious in his demands for the spirit that she was afraid to refuse him.

For the last five months the “spasms” have left him, but he has instead what he calls a “thickness”—tight constricted breathing—two or three times in the night, and sometimes by day; and this he finds equally relieved by the brandy—equally, but not so instantly relieved; the relief begins at once, but it is often ten minutes or a quarter of an hour before it is complete, and sometimes half an hour before he lies down and goes to sleep. He takes it twice in the night, or three times, but none by day. The quantity now consumed in the twenty-four hours is about five or six ounces. It now never produces any effect on his head. But though he takes it in such reduced quantity, it still must be taken hot and strong; to use his own expression, “the water should be boiling”—as hot as you can get it down; *warm* water is of no use.

He believes himself that the brandy acts by favoring expectoration; but this cannot be, as the relief begins prior to the spitting. I believe the order to be the reverse, and that the expectoration comes in consequence of the relief.

This is a remedy that one would, and properly, feel great reluctance in commencing. Alcohol is a thing the use of which is much more easily begun than left off. Moreover, it requires to be given in constantly increasing doses. Besides, if given as a remedy for a chronic affection, it has far more likelihood of becoming habitual than if taken for any other reason; for, since the circumstance that requires it constantly recurs, its administration also constantly recurs; and thus that which was given in the first place in small doses, and for a mitigation of suffering, is ultimately taken in excessive quantities, and becomes a necessity of itself. Still, in the face of the horrible sufferings of asthma and the inoperativeness of every other remedy, I think we are justified in giving it. I would go so far as to say I do not believe we should be justified in withholding it. Only our patient should be clearly made aware of the tendency of the remedy, and that it is one that can only be administered for

a certain time. If the paroxysms are of frequent occurrence, and the dose of alcohol required to subdue them is large, its unlimited continuance would only exchange the uncertainties of asthma for the certainties of kidney or liver disease, or delirium tremens: the common-sense rule of choosing the least of two evils would be enlisted against its use. I admit that this consideration, however striking the effect of the remedy, greatly diminishes its practical value. Still, in these cases I have related I have been very glad to avail myself of it, and the poor patients themselves have felt thankful that there was at least one remedy on which they could fall back in their extremity. It is a great point gained to stop the paroxysm in any way whatever; and the clinical history of asthma is so capricious, that it is always possible that before any remedy has been continued prejudicially long, it may on the one hand cease to be necessary, or on the other may cease to be efficacious.

What is the theory of the action of this drug in asthma? I think it is the same as that of other stimuli—of strong coffee, mental emotion, &c.; that it acts as what I call, for want of a better term, a “nervous derivative;” that it puts a stop to the asthmatic state by the establishment of a new nervous condition; it gives a sort of shock or shake-up to the nervous system; in the language of the French semi-official press, it “profoundly modifies the situation.” We know that an inceptive epileptic fit may be stopped on exactly the same principle. Such a theory has nothing in common with the treatment of acute inflammatory and other diseased conditions by alcoholic stimulation.

In carrying out this treatment the following rules must be borne in mind:—

That the alcohol must not be given as a diet—that is, not given as a part of a meal, or sipped gradually.

That it must be given in quantity sufficient to produce the physiological effects of the drug.

That the most concentrated forms of alcohol are the best—brandy, whiskey, gin; the weaker being inoperative in proportion to their dilution.

That for some reason or other—probably because it increases the stimulation—it is best given hot; not warm, but *hot*.

That its continued use requires that the dose should be constantly increased, in order to produce the same effect.—*Lond. Lancet*.

THE number of patients admitted to the Vermont Asylum for the Insane, at Brattleboro', for the year preceding the date of the last Report, was 98; remaining at the beginning of the year, 463; total in the Asylum during the year, 561. Discharged during the year, 119. Since the opening of the Asylum, 3552 have been admitted and 3,110 discharged, and of the latter 1,635 have recovered.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, DECEMBER 10, 1863.

HOME CHARITY.—We are pleased to see that the subject of women's work and women's wages is at last beginning to attract some proper share of public attention. We have been so entirely absorbed in providing for the comfort of our suffering soldiers in the hospital and on the field, that we have been somewhat unmindful of those at home who also need our protection. The young lady who formerly bestowed upon a mission school or charity sewing-circle her surplus of tenderness and time and wealth, now nobly devotes both fingers and heart wholly to her country, and the fair which a few years ago overfilled the treasury of the Provident Association is now to be far outdone in brilliancy by one in aid of the Sanitary Association. We would not have less done for the one, but we would have nothing left undone for the other also.

There can be no doubt that the sewing-girls of this city, as everywhere else, are overworked and underpaid, and that consequently both sickness and sin are much increased among us. They are obliged to work from seven o'clock in the morning until seven or eight in the evening, and during all this time to sit over their needle or sewing-machine in a room in which two or three hundred are collected, and which is ventilated only by opened windows. The system of piece-work allows them no intermission from their toil, for it is only by incessant industry that they are able to earn fifty cents a day. When we reflect upon the great increase in the prices of the necessities of life, and that many of these women have families to support by their exertions, we may imagine how far this sum will go towards rent and fuel and clothing and food. If we consider, too, the ridiculous vanity and extravagance in dress of the shop-girl of this country, it will be understood how easily she may be tempted to go astray. The central office of the Dispensary is constantly frequented by women of this class, many scarcely more than sixteen years old, whose cough and anæmic appearance proclaim at once their occupation, and who all tell the same story of overwork and crowded rooms. It is with difficulty that they can even be prevailed upon to give up work long enough to pay a weekly visit, being satisfied if they can only be patched up in health.

This certainly is all wrong, and we have no right to satisfy our consciences by saying that such is the case the world over. Working-men are everywhere forming leagues to exact higher wages from their employers, and successfully. They demand for one day's labor of a few hours the same sum that the poor woman must work far into the evening to obtain at the end of the week. Although we are no friends of such combinations, we are still pleased to see the employees once in a while hold the best cards in their own hands, and we doubt if they abuse their opportunities as much as their masters. We hope that the same system may be employed in behalf of the sewing-girls, but we fear that unless some society or ladies' committee shall assume the initiative in such a movement and guide its councils, any rash attempts,

as recommended in some of the daily journals, will be worse than useless.

THE London *Lancet* of Nov. 7th contains full reports of two new cases of death from chloroform inhalation in private practice, and the week previously noticed two which had just occurred in London hospitals. We make the following extracts:—

“At the inquest, Dr. Blackmore said—I saw the deceased for the first time on Sunday night; she was suffering from fistula. On Monday I called, and told Mrs. Luther that although I did not think it necessary to bring a second surgeon, I would do so if she wished it. She left the decision to myself, and I decided on not bringing any one with me. The patient was lying in bed, and appeared pretty well. I ordered castor oil and a little brandy-and-water. Before I commenced the operation I gave her about a tablespoonful of raw brandy. I then poured a small quantity of chloroform on a handkerchief, which I placed on her face; she inhaled it freely and was soon under its influence, but struggled slightly while she was insensible. The whole quantity of chloroform taken was four drachms and a half. She was insensible for about six or seven minutes. The chloroform was quite pure, and of the usual specific gravity. As she became insensible I commenced the operation, which lasted two or three minutes. The handkerchief was removed before the operation. At the termination of the operation I found she had not revived; her respiration became gradually slower, and ceased in about three minutes. I applied cold water to the face, administered sal volatile, used the galvanic apparatus, and had recourse to Dr. Marshall Hall’s plan for procuring artificial respiration, without effect. I am constantly in the habit of using chloroform, and occasionally without an assistant, according to the nature of the operation. Unless there are peculiar reasons, it is not necessary to have the assistance of a second surgeon. From her previous history there were no symptoms that led me to infer that there was the slightest danger. Her heart did not appear to be diseased. She suffered occasionally from indigestion. * * *

“The second case occurred in the practice of Mr. John Gay, surgeon, of Finsbury place, Finsbury, also in the person of a young woman, aged 16.

“At the inquest, Mr. Gay said—I was consulted about six weeks ago for a hare-lip and cleft palate and enlargement of the tonsils. I removed the tonsils six weeks ago, not under chloroform. Then the palate was to be repaired. After the operation on the tonsils the deceased became generally well. On Wednesday I went to her house to operate on the palate. Mr. Worley helped me. It was not under chloroform. After commencing the operation her courage failed her, and she would not allow me to proceed. At that portion of the treatment it was agreed that the operation should be deferred. On Thursday she came to my house to have her lip operated on, and Mr. Worley came to assist me. Mr. Worley is a surgeon of Hoxton, and a very skilful man. He has administered chloroform under my superintendence. The deceased appeared in good health and spirits, and sat down in a chair. Mr. Worley assisted me in the operation on a child, and it was all right. We used an inhaler for the deceased, but it had not the desired effect, and a piece of lint saturated with chloroform,

was applied to her nostrils. In three or four minutes the usual spasms which precede the loss of sensibility were apparent, and I was waiting for complete insensibility, when I discovered that the pupil dilated rapidly; she fell back, and her face became pale and her lips bluish. I put my hand to her pulse, and it was gone then—there was no life. I immediately tried every means with artificial respiration for half an hour, without success. The mother, my servant, Mr. Worley, and myself were in the room. Mr. Worley did not attend to her pulse continuously. It was not necessary in my judgment. Whilst he was administering the chloroform, I was standing close by watching the effect of the chloroform, and making any suggestion that might arise. I had felt the pulse more than once. I do not think it necessary for the same person to notice the pulse who administers the chloroform. It is constantly the practice to administer chloroform without noticing the pulse. I was not holding her pulse at the time when she went off. I think an occasional feeling of the pulse quite sufficient. I had listened to her heart before. I know it was not diseased. This is not so good a criterion as other means—such as watching the pupil of the eye and feeling the temporal artery. * * * *

“The learned coroner, in summing up the evidence, dwelt in strong terms upon the omission of the medical men continuously to watch the pulse; for, he said, had the pulse been continuously attended to, it was probable that the life of the deceased might have been saved. From his own personal experience he could say that it was usual for the administrator to hold the pulse. He could not recommend the jury to return a verdict of manslaughter, for it was evident that it was an error of judgment.

“After a long consultation, the jury returned a verdict ‘That Ellen Smith had died from the effects of chloroform administered previous to an operation, and that there was no blame attached to the medical men.’”

In its editorial comments on these cases the *Lancet* says:—

“We consider that in *all* cases the chloroform ought to be administered by a second person, whose sole business it is to attend to that duty. We deem it to be a most important function of that person to carefully watch the face of the patient, note his respiration, and above all attend carefully to the state of the pulse. The results of investigations certainly tend more and more to confirm the opinion that these deaths by chloroform are heart-deaths, and the observation of the pulse is therefore a matter of the last importance. Finally, we believe that chloroform ought to be administered as far as possible in a definite relation of percentage to the atmospheric air supplied at the same time; and no apparatus yet devised seems to fulfil the indication so well as that of Mr. Clover, which is in use at the University College Hospital.”

ETHNICAL ARCHÆOLOGY.—We hope that none of our readers in the city and vicinity will fail to attend the exceedingly interesting and valuable course of lectures on Ethnical Archæology, now in course of delivery at the Lowell Institute by Prof. Wilson, of Toronto. This gentleman stands at the very head of the scientific men who have made this subject a study, and his rare literary and scholarly attainments, together with his investigations in relation to the remains of

pre-historic man upon this continent, combine to render his lectures highly instructive and entertaining.

JOSEPH HYRTL, THE ANATOMIST OF THE VIENNA MEDICAL SCHOOL.—The amphitheatre of the anatomical department of the great medical school in the Austrian capital, Vienna, was always crowded, for Prof. Hyrtl's demonstrations of Topographical Anatomy, although the lecture was at an early hour, for a winter morning, between six and seven. The lecturer came in, dressed in very shabby attire, the main features of which were a soiled morning gown and a stock without a collar, and pushing up his large horn spectacles, began with some humorous remark, exciting a roar all through the class; after which he would go seriously to work, although during the hour and a half many an excellent joke would be made.

There is not that profuse pictorial illustration which adds so much to anatomical demonstrations in America, but there is that which well nigh more than compensates for it; that is, a blackboard, which is kept covered with striking diagrams, drawn by the lecturer with rapid hand, turning his head half round while at work to see if his audience be satisfied with the delineation.

Hyrtl's animation and wit, as displayed in his lectures, are not without their critics. I heard quite an eminent teacher speak of him as a "play actor." Be that as it may, he holds large classes, whilst Rokitsky, with a world-wide fame, has scarcely a dozen to hear his monotonous readings from books long since given to the public.

Joseph Hyrtl, one of the professors of anatomy in the Imperial University of Vienna, born in Hungary in 1811, studied medicine in Vienna, and two years after graduation, in 1835, was elected Professor of Anatomy in the famous old university in Prague, where he remained until called to the chair which he now occupies.

His great achievements have been in his minutely injected preparations, and those illustrating some points in comparative anatomy, especially that of the internal ear, and in his published works, which are widely known and appreciated. These last are as follows:—*Hand-book of the Topographical Anatomy of the Human Body. A Text Book of Human Anatomy. Comparative Anatomical Examinations of the Inner Ear of Man and the Mammalia*; with some other works of less importance.

Prof. Hyrtl did very much to form the anatomical museums in Prague and Vienna, besides making a very large private collection, which was destroyed by soldiers, with his house, in getting at the insurgents or revolutionists in 1848. While Dr. Hyrtl was assisting in the hospital in the care of the wounded, this was done. He returned home to find his private effects, with the result of his scientific labors, entirely destroyed. Referring to this he said: "On seeing the ruins I went to a neighbor to borrow a shirt to replace mine soiled with blood, and a handkerchief with which to weep;" not quite as philosophical as Sir Isaac Newton, when his dog Diamond had destroyed the papers filled with the calculations of years.

The Professor has, however, a new collection, made since 1848, consisting mostly of the skeletons of fishes. This is very large, filling two large rooms, and coming from all parts of the world. He has

also a large collection of the *ossicula auditus* of the mammalia. This is probably the most complete in the world, and for it he obtained a medal at the last London exhibition. They are arranged on black-boards, and possess the highest interest to the student. The Professor practised surgery for a little time, but gave it up in disgust to go back to his anatomical studies, after having amputated the leg and thigh successively in a case of malignant disease, and seeing it return in the hip-joint. Hyrtl is a very industrious man, spending his days in dissections in a dirty little room just back of the amphitheatre, with a text book of anatomy before him. In person he is tall and well-formed, pleasing in speech, and his writings are characterized by originality and humor, combined with lucid expression.—*Foreign Correspondence of the American Medical Times.*

THE influence of the cotton famine on the rate of mortality was the subject of a lecture by Dr. Noble at the last annual meeting of the Statistical Society of Manchester. He said he had the best grounds for stating that for the last two years there had been no unusual mortality in the cotton districts.—From the last census it appears that there are, in England and Wales, one surgeon or general practitioner to about 1712 of the population, one physician to 5532, and one dentist to 3505.—*London Lancet*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 5th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	39	47	86
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.7	37.7	78.4
Average corrected to increased population	00	00	85.80
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
18	6	3	6	0	0	1	0

BOOKS RECEIVED.—A Manual on Extracting Teeth. By Abraham Robertson, D.D.S., M.D. Philadelphia: Lindsay & Blakiston. 1863.

MARRIED,—At Castleton, Vt., 1st inst., Benj. T. Crooker, M.D., Surgeon at Balfour Hospital, Portsmouth, Va., of Bridgewater, Mass., to Miss Roxanna Warren, of C.

DIED,—At Sanbornton Bridge, N. H., Nov. 27th, Dr. Moses Carter, aged 81, recently from Concord, N. H., and formerly of Amesbury, Mass.—At Gardiner, Me., Oct. 29th, Joseph Merrill, M.D., aged 58.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 5th, 86. Males, 39—Females, 47.—Anæmia, 1—apoplexy, 2—congestion of the brain, 2—disease of the brain, 1—bronchitis, 3—burns, 1—cancer, 3—consumption, 18—convulsions, 2—croup, 6—debility, 2—diarrhœa, 1—diphtheria, 3—dropsy, 2—dropsy of the brain, 1—epilepsy, 1—scarlet fever, 3—typhoid fever, 1—gastritis, 1—hæmoptysis, 1—disease of the heart, 1—jaundice, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 6—marasmus, 1—measles, 2—old age, 6—paralysis, 1—premature birth, 1—puerperal disease, 1—syphilis, 1—teething, 1—tumor, 1—unknown, 2—whooping cough, 2.

Under 5 years of age, 28—between 5 and 20 years, 9—between 20 and 40 years, 15—between 40 and 60 years, 18—above 60 years, 16. Born in the United States, 49—Ireland, 28—other places, 9.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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No. 20.

ON THE LARYNGOSCOPE AND RHINOSCOPE.

BY EPHRAIM CUTTER, M.D.

[Read before the Middlesex East District Medical Society, Nov. 18th, 1863, and communicated for the Boston Medical and Surgical Journal.]

INTRODUCTION.—It is now almost a year since I had the pleasure and privilege of exhibiting to you the laryngoscope and rhinoscope in some auto-laryngoscopic and rhinoscopic demonstrations. You will recollect that I then displayed to you the larynx and its appendages, and the internal nares, with the turbinated bones, and the orifices of the Eustachian tubes. At that time nothing more was done than to exhibit the parts without any explanation. It is proposed in this paper to give an account of what I myself know in relation to the instrument, in the hope that my limited experience may benefit those who have no acquaintance with the practical workings of the instrument. It is perhaps unfortunate that such formidable names should be attached to such a simple instrument and such simple means of exploration. But as they have the great advantage of appropriate signification, and can be replaced by no better, the profession must excuse their employment. They should penetrate through the guise and distinctly understand that *this means of exploration is wholly within the reach of every practitioner, and that no physician is excusable who neglects to practise the examination of the laryngeal and nasal cavities.*

History.—Laryngoscopy is comparatively a very modern department of physical exploration. Rhinoscopy is of still later origin. As long ago as 1840, Liston suggested and employed laryngoscopy. Mr. Avery and Signor Garcia next followed. The latter gentleman has published some classical observations upon the effect of vocalization upon the larynx. It is, however, probable that the laryngoscope would now be comparatively unknown but for the labors and published observations and personal demonstrations of Prof. Czermak, of Prague, in Bohemia. This gentleman has made laryngoscopy a science, and has been very laborious, persevering and self-sacrificing in his endeavors to benefit his profession in this depart-

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ment. He may be said to be the father of laryngoscopy. I had the pleasure of meeting with him in Paris, in the summer of 1862, and of witnessing his demonstrations in the Hôpital Laraboisier. He introduced me to Dr. Semeleder, of Vienna, who further demonstrated the *modus operandi* upon himself and upon the patients of the Gumpendorf Hospital. The visit of Dr. Czermak to London at the time of the Great Exhibition of 1862 was very well received, and he established so triumphantly the claims he asserted for his branch, that there has since arisen there some eminent and skilful observers, who have improved upon the instructions of their teacher, so that now London may be deemed a most important centre of instruction. Prof. Czermak waives the claim to the discovery, which is accorded to the English brain. Still, he stands first and foremost as the utilizer and practical demonstrator.

In this connection, I may allude to my own experience. When I was in my medical pupilage, sitting at the feet of the eloquent Professor of Anatomy and Physiology in the Massachusetts Medical College, his glowing descriptions and ingenious and successful demonstrations filled me with a longing desire to behold the living larynx *in situ naturali*, and to study the mode of the production of musical sounds and of the voice. I knew that in the book entitled "What to observe in Medical Cases," published by the London Society for Medical Observation, there was some allusion to a throat speculum; but no inquiry of mine sufficed to get me the instrument or give me an idea of its construction. I was forced to look within and around myself for the apparatus. It was not until the latter part of 1858 that I devised an instrument and sent drawings of it to the maker. The idea was derived from an Amici's prism contained within my microscope. It was for a long time a question with me whether the larynx could be illuminated and inspected with one ray of light. I conceived the idea of using the ophthalmoscopic reflecting mirror which is so commonly employed now. I thought that the temperature of the apartment should be raised to 98° to avoid the deposition of moisture upon the prism. I thought that a tube was necessary to hold the prism. I invented the name laryngoscope. In fact, Messrs. Clark, the telescope makers at Cambridgeport, made me my instrument. It did not work to suit me, and laying aside both it and my patience, I was roused up by Czermak's publication to find that I had the principles and the leading features all correct, but needed only a little more perseverance in manipulation to accomplish the desired results. It will be no wonder to you, then, that I take some interest in bringing to your notice the subject of the present essay. I shall attempt briefly to describe the instrument, its accessories, its method of employment, what can be seen by it, its uses, and its manufacture and employment as being within the reach of every practitioner of medicine.

The instrument.—The instrument is very simple. It is merely a plain

mirror mounted upon a wire, and provided with a handle long enough to reach into the pharynx. The mirror may be of polished metal or of glass silvered, as in ordinary looking-glasses, or by the reduction of the oxide of silver, as in the silvered glass door-knobs of the present day. Pieces of ordinary looking-glass answer well enough. The shape varies. That which Czermak used on himself was about one inch square, with rounded corners. This size I have found most convenient. The mirrors generally sold are too small. It was so in my own instrument. It is well to have several mirrors of different sizes, from one inch square downwards.

This mirror is set in a piece of metal, and at an angle of about 112° is attached by one corner to a wire of iron, known in commerce as No. 15. In the case of the looking-glass mirror, the fragment may be cut out by a glazier's diamond, the edges ground and the corners rounded by a fine-grained grindstone, and set in a piece of thin tinned iron. This should be as much larger than the mirror as twice the thickness of the mirror. Little square bits should be nipped out of the corners, so that the edges, when turned up, will nicely fit the sides of the glass. It can then be burnished and soldered to a moderately stout annealed iron wire, from four to six inches in length. Charriere supplies a perforated handle, which slides upon the wire and is set by a screw, thus enabling one to graduate the length of the instrument to the size of the mouth. I have found a good-sized bottle cork, perforated longitudinally, to answer very well indeed. Sometimes it is necessary to change the angle of the mirror with the staff, and when the wire is annealed it is easily bent as desired.

The Rhinoscope differs from the Laryngoscope only in size. It is smaller, three quarters of an inch square. Its angles and manufacture are the same as those of the laryngoscope.

The Accessories.—These are indispensable for securing illumination. They are first, *the light*. This may be the direct or reflected ray of the sun, or the direct or reflected ray of an artificial origin. This country is very fortunate in the universal employment of the kerosene lamp. The light from this lamp is superior, and can be obtained in the houses of the poor and the palaces of the rich. No better light is needed for laryngoscopic investigations. Dr. Semleder advises that one kind of light be used exclusively, either that of the sun altogether, or that of the artificial altogether.

(a) *Sun Light.*—When the direct ray of the sun is used, the patient or observer is so placed that the sun shines directly into the mouth. This can be best done at sunrise or sunset. In autolaryngoscopic investigations I have stood before a curtained window and drawn down the curtain so as to shield the eyes, but not the mouth, and have obtained very satisfactory views; but ordinarily, it is better to use some reflecting agent which will throw a horizontal ray into the mouth at any time of the day. I have devised a

simple stand for this purpose, which I have found to work well. It consists of a base (which in my stand happens to be a discarded hub of a wheel, sawn through the middle). Into this fits a stem, which may be of pine, or cane pole, or oak (a rake handle in my case), about four feet in length. This stem is divided by two joints into three pieces. The second joint turns at a right angle with the first. The joints I have made in two ways, which have answered well, but can be improved. In the first way, the stem is sawn across square. It is then sawn in the direction of the axis at right angles with the square end—for two to three inches; the corresponding portion of the stem is similarly sawn. The square ends are bevelled off parallel to the longitudinal cut. A piece of tinned iron is then fitted into the longitudinal cuts and secured by two screws, one in each contiguous segment of the stem. This gives a very good joint, and it may be strengthened by a piece of tinned iron tube slipping down over the joint. The second joint is similarly made, only its plane of motion must be exactly at a right angle with the plane of motion of the first joint.

Another joint may be made in the same manner as that just described, by dispensing with the tinned iron connection and sawing off one half of the segmental ends at the bottom of the longitudinal cuts, in such a manner that the ends fit each other, and may be secured by a screw, which may be regulated by a screw-driver, and the stem set at any desired angle. A small mirror is mounted on tinned iron soldered to a wire parallel to the long diameter of the mirror. This wire is inserted loosely into a hole bored into the free end of the stem, in the direction of its axis. This allows the mirror to be turned about freely, and, with the assistance of the two joints, I never have failed in getting a ray of the sun into the mouth. As the earth moves, the ray of the sun travels soon out of range, when the examination is protracted. I have then employed a large mirror, and given it into the hands of an assistant to hold. This has done well.

Artificial Light.—This may be used direct; but it is usual to employ reflectors. These may be the ordinary perforated ophthalmoscopic reflector, or concave reflectors of polished metal, say an old daguerreotype plate. These may be attached to (a) spectacle frame, (b) a band of vulcanized rubber surrounding the head of the observer, bringing the reflector upon the forehead, (c) to a simple handle to be held in the hand.

It is not necessary to strain the eye by peering through the perforation in the ophthalmoscopic mirror when attached to a spectacle frame.

An important accessory is a lamp with which to warm the laryngoscope, so that the moisture of the breath may not be condensed upon the mirror and the view obscured, which will be the case when it is below the temperature of the expired breath. The

laryngoscope is held just above the flame, and then gently tested upon the cheek of the observer, to guard against burning the throat.

Two chairs are needed—they should be firm, strong, and that of the observer higher than the other. It is well to have a piece of chamois skin and napkins at hand to cleanse the mirror from mucus and saliva which will collect upon it. In auto-laryngoscopy, it is necessary to have a small mirror for the purpose of observation. This may be held in the hand or upon a stand, as Czermak did.

Method of Employment. (1) *Auto-laryngoscopy and Auto-rhinology.*

(a) *Direct Sun Light.*—Necessary articles—laryngoscope, hand mirror, lamp for heating. Stand in such a position that the sun will shine into the throat directly, and not shine into the eyes. Hold the tongue with the tip against the inside of the lower incisor teeth, depressing the longitudinal axis in the middle, and allowing the sides to rise close to the teeth. Warm the laryngoscope and test it upon the cheek, make the sound “ah” continuously with a tone which is represented by the letter F upon the upper line of the tenor and treble clef. Hold the hand mirror in the left hand, so as to command a view of the fauces. This is just above or just below the plane of the illuminating ray, taking care not to diaphragm off the ray from the throat. Hold the laryngoscope in the right hand, in the 6th position of the knife, or like a fiddle bow, having, of course, the back of the mirror directed towards yourself. Introduce the laryngoscope into the mouth so that the stem passes over the right molar tooth of the lower jaw, and the mirror comes under the uvula, or nearly against the posterior pharyngeal wall. The angle of the mirror which is attached to the stem may be turned to the right of the mouth or to the top of the mouth. A little patience and frequent trials, if the first does not succeed, will show you the epiglottis standing up straight, and seemingly at the back part of the throat, as the mirror reverses the position of things. You can see the white, glistening, inferior vocal cords, vibrating only a small segment of their length. If you can cease your sound and take a full breath, you can see, or we are told that you can see, the rings of the trachea, and perhaps the bifurcation of the primary bronchi. I have never recognized it yet. If you laugh, you see finely the superior vocal cords and the space between them. You see also the arytxenoid cartilages. It is interesting to watch the changes of the inferior vocal cords in singing the diatonic scale, and trace the analogy to the vibrations, as far as length is concerned, with that of the viol strings. But you have got tired before this, and if you don't gag you will do well.

(b) *Auto-laryngoscopy by indirect or reflected Sun Light.*—Necessary articles, the same as in (a), with the addition of the laryngoscopic stand. Place the wire of the reflecting mirror in the hole in the extremity of the stem of the laryngoscopic stand described above. Arrange a chair in a convenient place. Throw the light, by chang-

ing the angles of the stem of the laryngoscopic stand, till it strikes about a foot above the back of the chair. Take your seat, and generally the light will fall into the mouth. If it does not, alter either your position or that of the mirror till it does come right. Then hold the hand mirror, the laryngoscope previously warmed and tested as above directed, and work quick, for the sun's apparent motion will take the ray out of your mouth. The appearances will be as before described.

(c) *Auto-laryngoscopy by direct artificial light. Necessary articles.*—A good clean kerosene lamp, with a steady flame; laryngoscope; hand mirror. Place the lamp and yourself in such a position as to illuminate the throat. Use the same precautions as given above, and you will obtain a view, but not a good one.

(d) *Auto-laryngoscopy by reflected artificial light. Necessary articles.*—Kerosene lamp, laryngoscope, hand mirror, reflector. The lamp should be placed as in ophthalmoscopy by the side of the head, behind the eyes of the observer, seated in a chair. The light may be thrown in by an assistant sitting in front and holding the reflector in the hand; on the head, over the eyes, or on the forehead. Or the reflector may be placed upon a stand. The precautions and steps to be observed are the same as mentioned above.

The difficulties that attend auto-laryngoscopic investigations are, first, gagging; second, attempts to vomit; third, weeping; fourth, the tongue's getting in the way; and, fifth, a want of proper holding of the head and neck. All these difficulties vanish upon repeated trials; the throat gets educated to the presence of the foreign body and the unusual demand upon it. I can now easily put my fingers against the uvula and posterior pharyngeal wall and hold them there for some time with convenience, which at first was impossible.

(2) *Auto-rhinscopy.*—The illumination should be direct or reflected sun light, or reflected artificial light. The sun light is the best. The necessary articles are a lamp for warming, a hand mirror, and the rhinoscope. The positions are the same as the positions in laryngoscopy. The rhinoscope is warmed and tested on the cheek. It is introduced over the first molar of the lower jaw, right side. The attached angle of the mirror plate to the stem is placed downwards and to the right, so that the upper edge of the mirror makes an angle with the posterior bony wall of the pharynx. Of course the hand mirror is held in the left hand. Dr. Semeleder employs a fixed mirror for observation instead of the hand mirror, and uses a sort of hook to elevate and draw away the soft palate. In my own case, I have obtained good views of the turbinated bones, the nasal passages and the orifices of the Eustachian tubes *without* the palatine hook. I find these nasal investigations more nauseating than the laryngoscopic. These self-explorations are so easily conducted that the enjoyment afforded is richly worth twice the trouble.

(3) *Laryngoscopy Objective*.—Here are found the chief difficulties in this department of physical exploration. Sometimes the patient does not comprehend the instructions, gags, persists in pushing the tongue up in the way, or so contracts the muscles of the throat as to annoy if not frustrate the operator. All cases are not alike. Some hold these organs with perfect ease. But patience, perseverance and practice make way with the most disheartening obstacles. My experience in objective laryngoscopy is not so large as in auto-laryngoscopy. I cannot therefore speak so freely, but will endeavor to give you the methods as I have practised them.

The Illumination.—(a) Reflected sun light; (b) reflected lamp light. The artificial light is most used. I have liked the mirror held in the sun light by the hands of an assistant who may be an attendant or friend of the patient. The necessary articles are the laryngoscope, the lamp for warming, the reflector, the illuminating agent, two chairs—one higher than the other, a spatula to depress the tongue, or a clean pocket-handkerchief to draw the tongue forward.

Position of the Patient.—When the reflected sun's ray is employed, he should be seated in the lower chair in such a manner that the light will shine directly into the throat. A horizontal ray is best. He should hold his head somewhat forward and place both hands upon his knees in front of him. He should be instructed to press his tongue against his incisor teeth, depressing the middle line of the organ. A full and easy respiration should be practised, and all the parts relaxed. He should make a continuous sound, "ah," at the tone of the letter D on the fourth line of the tenor clef; or if a female, at the tone of the letter F, upper line of the treble clef. The observer should be seated in the higher chair, in front, and a little to one side, so as not to cut off the ray of light. The laryngoscope, warmed and tested, should be held in the right hand in directly the reverse position of that employed in auto-laryngoscopy. It should be introduced over the first molar tooth of the lower jaw, and brought near and under the uvula and soft palate, and turned so as to command a view of the larynx; the attached angle of the mirror should be turned towards the left of the patient's mouth, or towards the roof. The observer may move his head or the mirror till he gets a fair view. Generally the circumvallate papillæ and the root of the tongue are most distinctly revealed first, as it is a very natural thing for the patient to draw back his tongue. If this difficulty cannot be remedied by the patient, the observer may depress and pull forward the "unruly member" with the tongue-depressor, or the patient may hold it himself. Another excellent mode which I saw practised by Dr. Semeleder of Vienna, was to embrace the end of the tongue with a clean napkin, drawing it out over the incisors and holding it down close to the chin. This may be done by the left hand of the operator, or the right hand of the

subject. When the observer is ambidextrous, of course the hands can be changed to suit convenience.

When reflected artificial light is employed, the patient should be placed as in ophthalmoscopy, with the light on a stand by the side of the head and behind the eyes of the patient. The flame of the lamp should stand at about the same level as the mouth of the patient. The observer then sits as just described, with his reflector upon his forehead, held by an elastic band embracing his head or mounted upon a spectacle frame. By moving the reflector or the head, a ray can be thrown directly into the throat and the laryngoscope introduced as just directed.

One may understand all these details and the principles of the investigation, and yet fail from causes connected with the subject. There may be nausea, gagging, vomiting, generally there are tears, and the patient may make some movement of which his excitement renders him unconscious, and yet which defeats the examination. To obviate these, it is necessary to educate the throat, as the dentists do when they meet with the same difficulties in taking a cast of the mouth. This is done by the introduction of some smooth, innocuous foreign body into the fauces, and accustoming the parts to the contact of them. The dentists use a ball of wax, fastened to a bundle of flexible wires. A more convenient thing, is the hand and fingers of the patient. But care and perseverance will accomplish all that is desired. Because one is frustrated in a few attempts, there is no reason for discouragement.

Objective Rhinoscopy differs only in the size of the instrument, and in that the mirror is turned up instead of down. The directions for the position of the observer, subject, and the apparatus of illumination, are the same as for Laryngoscopy. The palate may be held up by Semeleder's palatine hook.

What may be seen by the Laryngoscope.—There is hardly a more interesting and instructive sight, to any intelligent person, than the inside of the living larynx. How many interests are associated with the functions of this organ;—Respiration, Phonation, and Cantation. Physiologists and musicians have long been puzzled about the production of the voice in speaking or singing. Now the mysteries have been somewhat unravelled. When a fair view is obtained of the healthy living larynx *in situ* and in action, the epiglottis is seen first standing upright. It appears to be at the further side of the throat, as the parts are reversed by the mirror. Opposite stand the arytenoid cartilages. Between are the vocal cords, white, glistening, cartilaginous, the included aperture forming a vibrating chink of a length corresponding to the pitch of a sound made, which we suppose is that of the syllable "ah." The superior vocal cords appear passive, or rather hardly appear at all.

In order to see the ventricles of the larynx, the person whose organ is examined should laugh, or attempt to do so. This brings

out the superior cords nicely. Let a relaxed movement be made, as in yawning, and the glistening rings of the trachea are clearly perceived. I have not recognized the bifurcation of the trachea.

The movements of the internal parts of the larynx in the act of swallowing are interesting. Dr. Semeleder showed this to me. In the first place the inferior vocal cords close firmly together, forming step number one; next, the superior vocal cords close, forming step number two; lastly, the epiglottis covers the glottis, forming step number three. The several parts of this triple act are successive, distinct, and well defined. How admirable the wisdom and skill displayed by the Creator, in thus appointing a triple-valved sentinel to exclude foreign bodies from the delicate door-way of so vital an organ as the lungs.

In order to become familiar with the healthy color and appearance of the mucous membrane of the parts, one needs to make frequent acquaintance with his own and others' larynges. Only then can the morbid appearances, among which are excrescences and polypi—thickening or ulceration of the vocal edges—want of parallelism of the vocal edges in paralysis—diphtheritic and croupal deposits—ulceration of the epiglottis.

What may be seen by the Rhinoscope.—In the healthy nares you see the vomer, the turbinated bones, scrolled and covered with their mucous membrane (which, on cold winter mornings, I have observed to be of a deep purple color, like that of the injected wattles of a turkey cock), the orifices of the Eustachian tubes.

The uses of the Laryngoscope are physiological, diagnostical, operative and therapeutical. No one can now entertain a doubt that the larynx can be catheterized—therapeutical agents can be accurately applied to the diseased structures, laryngeal outgrowths can be removed by the laryngeal ecraseur, the diagnosis of the hitherto obscure affections mentioned above can now be made out, and the physiology of this most wonderful organ can now be more fully understood.

The Rhinoscope is useful in detecting syphilitic and other ulcerations of the nasal bones and posterior nares—nasal polypi, catarrh of the nares and of the Eustachian tube; the lachrymal and Eustachian ducts can be catheterized with precision. These are enough to render the instrument a boon to the physician.

The patients upon whom these means of exploration are practised are adults, although one London expert announces that children can be explored.

The employment and manufacture of these Instruments are within the reach of every physician. From the minute details given in the course of this paper, I hope that the making of the Laryngoscope is put within the reach of every physician at a very trifling expense. Broken fragments of looking-glasses can be found about every house; glaziers' diamonds are in every town; grindstones are on every

farm; tin workers are generally within reach; the sun shines everywhere; and perseverance, tact and ingenuity are traits of common cultivation. Let these instruments be adopted, not to supersede but to supplement the ordinary methods of exploration in these parts which are so often affected by disease, and which ordinary therapeutics fail to reach.

Woburn, Nov. 18th, 1863.

CLINICAL DATA RESPECTING AMAUROSIS, MORE ESPECIALLY
RESPECTING THAT FORM OF IT SUPPOSED TO BE
INDUCED BY TOBACCO.

BY JONATHAN HUTCHINSON, ESQ., F.R.C.S., ASSISTANT SURGEON TO THE ROYAL
LONDON OPHTHALMIC HOSPITAL.

THE author stated that his attention had been drawn to the question of the possible influence of smoking in causing amaurosis by some papers which had recently appeared in the medical journals. He had collected together all the cases of true cerebral amaurosis of which he had taken notes during the past four years; they did not comprise all that had come under his care, but most of the more interesting ones. The cases quoted were 65 in number, and were allotted to three groups:—First, cases in which both eyes were affected and the patients were adults (47); secondly, cases in which both eyes were affected and the patients were children (11); and, thirdly, cases of amaurosis of only one eye (7). The subjoined table will show the relative proportion of the two sexes in each group:—

Series I.—Symmetrical, and in Adults:—

	Males.	Females.
Cerebral amaurosis, uncomplicated (idiopathic)	37	3
Ditto, probably complicated or secondary . . .	3	4

Series II.—Symmetrical, and in Children:—

Cerebral amaurosis, uncomplicated (idiopathic)	3	7
Ditto, probably complicated or secondary . . .	0	1

Series III.—Unsymmetrical (all ages)

3	4
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In this table, all the cases in which there was good reason to suspect that the amaurosis was secondary to other disease were considered as complicated; in the others (idiopathic) he had been unable, on careful inquiry, to discover any satisfactory explanation of the disease. It would be noted that a most remarkable difference in the relative proportion of the two sexes existed in the idiopathic class of the first series, and that this discrepancy was not found in the other groups. Mr. Hutchinson then proceeded to inquire as to how this great disproportion (37 men to 3 women) could be explained. The possible influence, 1st, of different occupations; 2d, of intemperance; 3d, of sexual irregularities; 4th, of venereal diseases; 5th, of injuries; and lastly, of tobacco, were severally exa-

mined. That occupation had not much to do with it seemed clear from the fact that the patients had followed most various callings; and as to syphilis and intemperance, to neither of these was the male sex exposed in sufficiently disproportionate degree to account for the very different numbers. In only 4 of the whole number of cases was there any history of injury to the head; and in 2 only of these could it be reasonably inferred that the injury had been the exciting cause of the disease. There remained then the possible influence of tobacco-smoking and of sexual excesses. The author stated strongly his conviction that the real explanation of the majority of cases of this form of amaurosis would be found in one or other of these two. Whether tobacco had any share, or whether all should be attributed to the former, he could not say. He wished to abstain for the present from any positive opinion, and simply begged to call attention to the clinical facts. It might possibly prove that, after all, this disproportion in the sexes was a mere coincidence, and that a larger collection of cases would show it to be such.

Amongst the conclusions obtained by analysis of the series of cases, the following are the more important:—In 23 of the 37 cases, it was recorded that the patients had smoked; whilst in 2 it was expressly stated that they had never done so; and in 12 there was no information. In 10 the patients had been intemperate. In only 2 could it be ascertained that the patients had had constitutional syphilis. In 4 instances the sufferers attributed their disease to anxiety. The disease had progressed to absolute blindness in 15 instances; in 5 it appeared to have been arrested; and in most of the others it was either progressive at the last date of notes, or the patient had ceased to attend.

With regard to the probability of sexual excesses having anything to do with the causation of the disease in question, the author stated that in not a few he had obtained the history of failure of sexual power. He had also found that varicocele was a frequent concomitant of this form of amaurosis. Still, on the other hand, in many instances the patients were healthy, robust men, who ailed nothing whatever excepting the loss of sight. In no single instance in the series was there any strong reason for attributing the disease to masturbation. Even if it were proved that varicocele, wasted testes, and loss of generative function were usual concomitants of this form of amaurosis in the male, still the tobacco hypothesis would not be wholly set aside, since the two classes of symptoms might both be due to one common cause. It was remarkable that in almost all the few cases in which the disease occurred idiopathically in females, there was the history of very decided disturbance of menstruation.

Although he felt that there were great difficulties in the way of belief in the tobacco hypothesis—such, for instance, that many of

those affected had smoked only quite moderately; that many had smoked for a long series of years before the amaurosis supervened; that thousands and thousands smoked to great excess without ever suffering from amaurosis; that it was not easy to understand how the tobacco poison could act on one single nervous ganglion alone, the other parts of the nervous system escaping—still, the author added, he thought there was enough of suspicion in the clinical facts to make it the duty of ophthalmic surgeons to insist on the disuse of tobacco in all cases in which the premonitory symptoms of this disease were presented. The subject was one well worthy of prolonged investigation, and no doubt it would soon be set at rest one way or the other.

In concluding his paper Mr. Hutchinson begged to note the following desiderata:—

1. A much more extended series of cases.
2. More detailed information as to the use of tobacco by those affected by this form of amaurosis.
3. Information as to whether there may not be a considerable proportion of men afflicted by it who have never used tobacco.
4. Information as to the co-existence or otherwise of varicocele with this form of amaurosis.
5. Information as to whether it ever occurs in women who have smoked. In some countries where smoking is more common amongst women than it is here, valuable information on this head might be obtained.
6. Better knowledge as to whether the course of the disease can in any considerable number of cases be suspended—1st, by making the patient give up smoking; or, 2d, by regulation of sexual habits.

London Lancet.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 17, 1863.

AMBULANCE CORPS OF THE ARMY OF THE POTOMAC.—A friend has placed in our hands a copy of General Order No. 85, dated August 24th, 1863, containing “revised regulations for the organization of the Ambulance Corps and the management of the Ambulance Trains.” We should be very glad, did space permit, to publish the order entire, but we must be content with giving merely a synopsis.

The first regulation provides that the Army Corps shall be the unit of organization for the ambulance corps, and the latter will be organized upon the basis of Captain as the commandant of the corps, one 1st Lieutenant for each division, one 2nd Lieutenant for each Brigade, one Sergeant for each regiment.

2. The privates of this corps will consist of two men and one driver to each ambulance, and one driver to each medicine wagon.

3. The two-horse ambulances only will be used, and the allowance, until further orders, to each corps, will be upon the basis of three to each regiment of infantry, two to each regiment of cavalry, one to each battery of artillery, to which it will be permanently attached, and two to the Head Quarters of each Army Corps, and two army wagons to each Division. Each ambulance will be provided with two Stretchers.

Regulation No. 4 prescribes minutely the duties of the Captain commandant; providing for the preservation of all the property entrusted to his care; the ordering and disciplining of the men under him; their careful training in the best methods of handling and transporting the sick and wounded; the efficient condition of the ambulances and all their appurtenances at all times; the proper distribution of the ambulances previous to and in time of action; the prompt and careful removal of the wounded from the field of battle to the point previously determined by the Medical Director of the Army Corps; a full report of his operations after every battle; the careful removal of the sick to general hospital or any point as may be ordered; a frequent, minute, and careful inspection of everything pertaining to the ambulance corps; and finally a weekly report, to be forwarded to the Medical Director of the Army.

Regulations 5, 6 and 7, prescribe in a similar manner with great minuteness the respective duties of the 1st Lieutenant, 2nd Lieutenant, and Sergeant attached to this corps.

Regulation 8 provides that two Medical Officers and two Hospital Stewards shall be detailed, daily, to accompany the ambulances when on the march, for the care of the sick and wounded conveyed in them, and lays down very stringent rules with regard to the care of these vehicles; prescribes exactly the position of the various officers and men belonging to the corps, and the medicine and other wagons attached to it.

Regulation 9 lays down very carefully the various duties of the officers of the ambulance corps while in camp, for the proper care of all the animals and vehicles of the corps and their exclusive application to the purpose for which they are intended.

Regulation 12 says that no person except the proper Medical Officers, or the officers, non-commissioned officers and privates of this corps, will be permitted to take or accompany sick or wounded men to the rear, either on the march or upon the field of battle.

13. No officer or man will be selected for this service except those who are active and efficient, and they will be detailed and relieved by Corps Commanders only.

So far as we are capable of judging, this Order strikes us as most excellent and all that could be desired for the effectual care of the sick and wounded of the army of the Potomac. It is worthy of notice, however, that this complete organization of the ambulance corps bears date so recently as August 24th, 1863; more than six weeks after the battle of Gettysburg, at which time, in the opinion of some, the arrangements of this department were the most perfect the world ever saw—and more than two years after the organization of this army itself. Surely this is only confirmation of what has been so strenuously claimed by the friends of that army, that such an organization has been very much needed. The order as it stands is by command

of General Meade, and it cannot be doubted its provisions will be carried out as fully as possible. Still it rests upon his authority only, and may be rescinded at any moment by himself or a successor in command. We have no means of knowing how complete provision has been made in the Western and Southern armies for the same purpose. It is very clear therefore to our minds, that so important a matter should be fixed by public law, and not left to the single authority of any man. We are not sticklers for any special arrangements in a general ambulance system, but what we do want to see is such a system made permanent and binding on our Generals by Act of Congress.

DR. RAY ON MENTAL HYGIENE.—Resuming our notice of Dr. Ray's admirable book, we come to the second chapter, which treats of the influence of physical agents. In this chapter, the importance of a due regard to the condition of the air we breathe, a proper amount of bodily exercise, a judicious diet, the question of the good or ill effect of stimulants, the needful amount of sleep and of mental labor requisite for the health of the mind, are treated quite fully, and in a manner calculated to arrest general attention. The whole chapter is so interesting that we hardly know where to make extracts. Space does not permit our copying as we should like to do from our author's very interesting observations on the insidious and too often unappreciated influence which vitiated air is constantly exercising upon a large class in the community. The following passage contains undoubted truth with regard to the general atmospheric influence prevailing in our portion of North America.

"The remarkable nervous excitability of our own people, indicated by restlessness, impulsiveness, impetuous and boisterous movement, probably arises from some quality of our climate. Certainly, there can be no doubt respecting the trait itself. From early childhood to mature decline, it is ever apparent, whether in the noise and rattle of the one, or the ardent, eager, insatiable spirit of the other. It is strikingly manifested in the insanity of this country, as compared with that of others. The most superficial observer does not fail to notice it in passing through the galleries of American and European hospitals for the insane. In the former, especially those of the Northern and Eastern States, more excitement will meet his notice in a single visit, than he will see in the latter, particularly the English, in a whole week or month. And yet this excitability is but little less apparent in the Germans, Irish, and English, who abound in our hospitals, than in the native Americans. Such facts should be duly considered by nervous invalids in deciding upon a change of climate, in order that the step may meet the requirements of their case."

In the following extract our author calls attention to a too common error at the present day, in the over-exercise of the mental faculties.

"The efficiency of the mind as a working power, will be affected, in a very great degree, by the stint of mental exercise to which it is subjected. A fruitful source of mental impairment is the prevalent mistake of supposing that the brain possesses a power of exertion and endurance unlimited by any other law than our own free will and pleasure. Here we disregard those laws of health which we respect in the exercise of other organs; and many a man who would shrink from the folly of habitually cramming his stomach with food, or of changing his dress incautiously, will work his brain every day beyond the point of fatigue; not even manifesting the prudence with which he would use the most common machine subject to the wear and tear resulting from friction and decay. In every department of mental exertion, we witness this serious mistake. The lawyer, the doctor,

the minister, the scholar, the merchant, the mechanic, all apparently act on the presumption that their brains are made of iron, which no conceivable amount of use can weaken or derange. In many of them, the brain is kept in a state of incessant activity, often of the most wearing description, during the greater part of the day. As a consequence of such habits, it is not strange that every description of mental infirmity should have increased among us of late, to an extent that has no parallel in former times. In the prime of life, in the midst of usefulness, men rapidly break down, and, after hovering around their customary haunts for a brief period, disappear forever. By insanity, paralysis, and other organic lesions, brains are now "used up," in the popular phrase, with a frequency that is full of instruction, if we would but heed it. Paralytic affections, which once were comparatively rare, and attributable in great part to hereditary predisposition or sensual indulgences, now occur in multitudes who seemed to be enjoying good health and had always been regular and temperate in all their ways. Indeed, were we to indicate that feature in the medical constitution of our times, which distinguishes it from all others, it would be our large proportion of cerebral affections."

Subsequently Dr. Ray answers the question, what is the proper measure of a day's work for the mind, as follows.

"How much a man may use his brain without endangering its health, is a question that admits of no definite answer, because it depends very much on the original stamina of the individual, and the intensity of his application. While it is easy, oftentimes, to see that this or that person is overtaking his powers, it is impossible to lay down any general rule on the subject that would not require too much of some and too little of others. In youth and early manhood, especially if the constitution is deficient in vigor, there would be danger from a degree of application, that might be safe enough at a later period, when the brain has become hardened by age and regular labor. So, too, habits of active physical exercise will enable a man to accomplish an amount of intellectual labor that would utterly break down one of sedentary habits. After making all due allowance for these differences, I think we may say, that few can exceed six hours a day of close mental application, without seriously endangering the health of the brain, while for most persons a not unreasonable degree of prudence would prescribe a much shorter period. It would not be easy to adduce many instances of persons who, for some length of time, had devoted more than six hours a day to pursuits requiring the exercise of the higher intellectual faculties, without impairing their powers, and failing to accomplish any results corresponding to the magnitude of their efforts. We hear, indeed, of persons studying ten or twelve hours in the day, but, with an occasional exception, it may well be doubted whether more would not be actually accomplished within shorter limits. In most persons, long before this period is finished, the process of thinking goes on heavily, the mind loses its power of original conception; and the result of its labors, while in this jaded condition, lacking the vigor and brilliancy of a fresh effort, is said to smell of the lamp."

Our author's remarks on the system of study now pursued in our schools are most excellent, and deserve the careful consideration of every parent. Some of the instances of task-work which he quotes from the course of study pursued in schools within his own knowledge, are truly appalling, particularly when he gives it as his deliberate opinion that

"Among these remoter agencies in the production of mental disease, I doubt if any one, except hereditary defects, is more common, at the present time, than excessive application of the mind when young. The immediate mischief may have seemed slight, or have readily disappeared after a total separation from books and studies, aided, perhaps, by change of scene; but the brain is left in a condition of peculiar impressibility which renders it morbidly sensitive to every adverse influence."

Our author attaches great importance to the proper exercise of all the faculties as a means of preserving the mental health. One-sidedness, which is a besetting fault of the times, he deprecates most heartily, and advocates a wise, general culture as the safest and happiest course. He thus pointedly tells the truth of one of the common errors growing out of the neglect of this wise principle.

"One of the most prolific sources of mental inefficiency in this our day and generation, is the undue cultivation of that power which, under one name or another, is chiefly occupied with conceptions of the beautiful, the exquisite, and whatever else is calculated to please the taste, excite emotion, or gratify and charm the fancy. No form of intellectual activity is so common as this. Under all degrees of refinement,—in sage or savage, idolator or saint, child or man,—it is equally obvious, varying only in the objects to which it is applied. In all, it relieves the hard, dull monotony of real life with inexhaustible sources of excitement and recreation. In youth and health and innocence, it gilds the future with the warmest tints of joy and hope, and invests every scene that it creates with a charm peculiarly its own. In disease its normal functions may be so disturbed that the conceptions become cheerless and painful beyond the experience of reality, and are bodied forth with a distinctness more vivid and terrible than any mere object of sense could present. In youth, especially, is this faculty active; and one of the crying faults of the education of our times is that it encourages its exercise to a degree incompatible with the claims of the other faculties. The license of youth is seldom corrected by the wisdom of riper years, and the whole mental history of the individual betrays the influence of this single fault. It begets a distaste for exact knowledge, for that is the fruit of laborious study; it indisposes the mind to habits of continuous thought, and quenches all thirst for intellectual excellence. The pleasures of the imagination are always accessible, and they can be enjoyed with little of that preparation which is needed in the case of other intellectual pleasures. This would be bad enough did the evil stop here, but it extends much farther. It actually incapacitates the individual for those intellectual efforts that are required for the great purposes of life, and circumscribes the sphere in which he can move with any degree of credit to himself or good to others. An imagination thus indulged, and feeling none of those checks and balances which the cultivation of other faculties would afford, easily wanders into devious paths that lead at last to helpless and hopeless derangement. Life becomes a dream, and that dream needs only favoring circumstances to be converted into delusion. I think it may be stated as one of the results of modern observation, that the man who enters upon life with no habits of serious and connected thought, with no taste for investigating the causes and effects of the countless phenomena passing around him, with no practical object clearly set before him and worthy the pursuit of a rational creature, whose joys and sorrows, whose principles and motives, whose ends and aims, are fashioned by the plastic touch of his own busy imagination, cannot promise himself exemption from mental disease, if at all predisposed thereto."

Again he inculcates a general cultivation of the mental faculties as follows:—

"A partial cultivation of the mental faculties is incompatible, not only with the highest order of thought, but with the highest degree of health and efficiency. The results of professional experience fairly warrant the statement, that in persons of a high grade of intellectual endowment and cultivation, other things being equal, the force of moral shocks is more easily broken, tedious and harassing exercises of particular powers more safely borne, than in those of an opposite description; and disease, when it comes, is more readily controlled and cured. The kind of management which consists in awakening a new order of emotions, in exciting new trains of thought, in turning attention to some new matter of study or speculation, must be far less efficacious, because less applicable, in one whose mind has always had a limited range, than in one of larger resources and capacities. In endeavoring to restore the disordered mind of the clodhopper, who

has scarcely an idea beyond that of his manual employment, the great difficulty is to find some available point from which conservative influences may be projected. He dislikes reading, he never learned amusements, he feels no interest in the affairs of the world, and unless the circumstances allow of some kind of bodily labor, his mind must remain in a state of solitary isolation, brooding over its morbid fancies, and utterly incompetent to initiate any recuperative movement."

Passing over what is said on the all-important subject of the passions, from which we would gladly quote if we could, we come to the following interesting passages on mental habits.

"The working of the mind is governed by the same laws in health as in disease, and no one much accustomed to observe it in himself or others, can have failed to witness the influence of habit even in those exercises which seem most independent of it. In speaking and writing, for instance, the thoughts follow one another, automatically, in a great degree, without any conscious effort of the thinking power. A man sits down at his table, with only the most imperfect conception of what he shall write, but thought after thought leaps forth, clothed in appropriate words, and the result is something which instructs and delights the world. A public speaker rises in his place, with only some general outline of what he intends to say, but the tongue is directed by an unceasing force, the right thing is said in the right place, and not only do arguments and images arise, almost unbidden, but while uttering the beginning of a sentence, the mind looks forward and conceives and arranges the next. Now, without pretending to furnish a complete explanation of these mental processes, it can hardly be questioned that this rapidity of movement is in a great degree one of the results of habit. Therefore, to derive the utmost amount of benefit from this law of our nature, care should be taken that our mental habits be rightly ordered. If they are regular and systematic, suited to the taste and abilities, and characterized by some activity and effort, they will impart to the exercises of the mind that ease and readiness of performance in which their efficiency so much consists. If, on the other hand, they are desultory and fitful, governed only by whim or caprice, and involving only the lower faculties, they make none of those permanent furrows, if I may use the figure, which guide and facilitate the courses of thought.

"The force of habit is no less powerful in perpetuating moral and intellectual peculiarities, and the fact should always be borne in mind by those who are entrusted with the care of the young. Upon them it may depend, whether an objectionable trait of character shall be eradicated by timely attention, or firmly established and thus become, at last, a prolific source of unhappiness, if not overt disease. The manner in which the latter result is brought about is well described in the following paragraph: 'Some are led to begin this course of error by distinct and well-marked tastes for it. In others, a feeling is accidentally excited; it may be very slight at first, but by repetition it gains strength, and ultimately becomes powerful. This is remarkably manifested in the caprices and perversities. The mind capriciously determines to be pleased with a small point, and through this sees all the rest. This prepossession compels the perceptive faculties to present the acceptable trait first to the mind, and put it in good humor to see those associated with it, and then it looks upon them, at last, with toleration. By repetition, the toleration becomes satisfaction, and approbation follows after. At last, the whole mind is brought under the power of the caprice; then opinions are formed, and a course of conduct pursued, from which the reason at first would have shrunk; but, being disarmed and made the servant of passion or caprice, it goes to strengthen the error and overthrow the judgment.'"—(Dr. E. JARVIS, in *American Journal of Education*.)

Our author gives the following sensible passages on mental recreation.

"Persons whose habitual employment requires considerable mental activity during several hours of the day, will best obtain the recreation they need by some kind of mental exercise which, without being fatiguing, requires just enough of effort to impart a degree of interest and satisfaction to the result. They need, not

so much absolute quietude, as a change of subject which calls into action a different order of faculties from those which have already been fatigued. A man's special pursuits are generally a matter of toil and taskwork, from which he gladly turns to something that appeals to his taste or fancy rather than to his needs. True, it may still be the higher faculties that are thus employed, but instead of the same daily routine, the employment is constantly suggesting new thoughts and new scenes, and being pursued at will, without restriction or limitation, the interest is steadily maintained. It is well to have some pet employment for one's leisure hours, with sufficient dignity to redeem it from the charge of frivolity and add a zest to the gratification it affords. The merchant who retires to his farm, and dismisses all thought of traffic while pruning his trees or discussing the qualities of his stock; the lawyer or doctor who relieves his professional toils by investigating some favorite subject remote from the ordinary sphere of his labors; the merchant's clerk, who, when the work of the day is finished, gladly turns to his book of history or biography; the mechanic or farmer who always finds an opportunity for learning the events of the time, or adding, in some way, to his stock of ideas—obtain a more durable gratification, and do more to repair the wear and tear produced by their more arduous occupations, than they would by devouring heaps of novels, or resorting to scenes of amusement."

We finish these extracts with one which is full of truth concerning our own people.

"Another prolific source of mental impairment among us is our ardent and impulsive temperament. I know not if the fact is to be attributed to atmospherical conditions, to nervous idiosyncrasies, or to national manners; but the fact itself is unquestionable, that, from the cradle to the grave, we are ever in haste. Whatever we do must be done in a hurry. Whether we eat or sleep, work or play, talk, write, or think, it must be accomplished under a pressure of excitement. Nothing in the whole range of our concerns seems to exhibit any exception to this principle. Whether it be a funeral or a wedding, a religious or political enterprise, in every form of business or pleasure, in every manifestation of joy or sorrow, in every plan for accomplishing good to ourselves or our race, the constant thought is how to obtain the maximum result in the shortest possible time. A few months or years seem to be sufficient for any conceivable purpose, and we regard with wonder, if not contempt, the steady perseverance that devotes a lifetime to any object whatever. Of all the qualities which a person or thing can possess, the highest in our estimation is speed. Not how well, but how quick, is our test of merit and measure of regard. The old-fashioned virtues, strength, stability, firmness, are rather respected than admired. The popular plaudits are bestowed upon whatever implies rapidity of conception or of performance; and the national reputation is supposed to be involved, not more in the punctuality with which we meet our pecuniary obligations, or our fidelity in executing the terms of a treaty, than in the feats of our fast horses, fast ships, and fast men. Unquestionably, this trait in our national character tends to precipitate the vital movements of the brain, and consequently to consume its energies faster than they can be supplied. Difficulties and disappointments which are especially incident to hasty and impetuous enterprise, frequently occurring, prematurely rob the mind of its elasticity, and prepare it for early decay. To suppose that the highest possible degree of nervous tension can be maintained for many years without impairing the efficiency of the brain, is simply to ignore the established principles of physiology. What the American brain wants, above all things else, is, as they say of machinery, a steadier movement. The quality of character in which we are peculiarly deficient is that moderation which springs, not from indolence or apathy, but from well-grounded self-confidence and unwavering self-possession."

The remaining portions of this interesting book, on Mental Hygiene as affected by the practices of the times and by the tendencies to disease, we must dismiss without special notice. We have copied freely from our author's pages, believing that the subjects of which he treats so well are not sufficiently considered by our people, and with the

hope that this little book may do something to avert the fearful consequences of the almost universal neglect of the laws of Mental Hygiene. It ought to be in every house in the land.

BERKSHIRE MEDICAL COLLEGE COMMENCEMENT.—The Annual Commencement of Berkshire Medical College occurred on Tuesday, the 24th of last month, and was an occasion of much interest. The following gentlemen received the degree of Doctor of Medicine, and read the theses the titles of which are printed opposite their names.

Kirk H. Bancroft, Lowell, *Pneumonia*.

Maurice K. Bennett, Burlington, Ct., *Gonorrhœa*.

Charles F. Couch, Pittsfield, *Etiology*.

A. P. Folsom, Oldtown, Me., *Exercise*.

V. H. Gaskill, Painesville, Ohio, *Physiology of Circulation*.

Wm. H. Graves, New Milford, Ct., *Death*.

Wm. H. Gray, Acton, *Scorbutus*.

E. W. Loveland, South Hartford, N. Y., *Importance of a Correct Diagnosis*.

J. F. Niver, Cedar Hill, N. Y., *Fractures*.

C. A. Osborn, Oneida Lake, N. Y., *Puerperal Fever*.

Ralph Sherwood, Fairfield, Vt., *Intra Capsular Fracture of Cervix Femoris*.

David Stephens, Addison, N. Y., *Shock*.

R. S. Turner, Morristown, N. Y., *The Human Skin*.

Frank Whitman, Bernardston, *Coxalgia*.

J. J. Woodbury, North Dana, *Dyspepsia*.

J. K. Draper, U. S. Army, *Quinia*.

The venerable H. H. Childs, President of the Institution, addressed the graduating class with much feeling, complimenting them highly upon their proficiency. The usual Commencement address was made by Dr. Pliny Earle, Professor of Materia Medica, Hygiene and Psychological Medicine. At the close of the public exercises, the usual annual dinner was given to the graduating class and invited guests at the Berkshire Hotel, and was an occasion of much social enjoyment.

The following is a list of the Faculty of the Institution as at present constituted:—Henry H. Childs, M.D., President; William Warren Greene, M.D., Dean; Henry H. Childs, M.D., Emeritus Professor of the Theory and Practice of Medicine; Timothy Childs, M.D., Prof. of Military Surgery; Corydon L. Ford, M.D., Prof. of Anatomy and Physiology; William P. Seymour, M.D., Prof. of Obstetrics and Diseases of Women and Children; Wm. Warren Greene, M.D., Prof. of Principles and Practice of Surgery and Clinical Surgery; Paul A. Chadbourne, M.D., Prof. of Chemistry and Natural History; Alonzo B. Palmer, M.D., Prof. of Pathology and Practice of Medicine; Pliny Earle, M.D., Prof. of Materia Medica, Hygiene and Psychological Medicine. E. B. Lyon, M.D., Demonstrator of Anatomy and Prosecutor of Surgery; A. J. Bigelow, Prosecutor to the Prof. of Military Surgery; Edward H. Sexton, A.M., Clerk of Clinique.

HEALTH OF PROVIDENCE, R. I.—Dr. Snow's Report of deaths for the month of November, shows the mortality of the city to have been somewhat above the average of the same month in former years. The whole number was 86, more than half of which were of persons above

30 years of age, one having reached the age of 103, and less than 20 per cent. being under 5 years. The mortality thus far, for the year, has exceeded by 165 that for the whole of last year. Diphtheria and fever caused but few of the deaths, and scarlatina none, in November.

The following are the various Medical Directors to whom applications for artificial limbs, from soldiers, should be made:—New York city, Surgeon C. McDougall, U. S. A.; Philadelphia, Pa., J. Campbell, U. S. A.; Baltimore, Md., Jos. Simpson, U. S. A.; Washington, D. C., R. O. Abbot, U. S. A.; Cincinnati, Ohio, W. S. King, U. S. A.; St. Louis, Mo., M. Mills, U. S. A.; New Orleans, La., R. H. Alexander, U. S. A.; Louisville, Ky., G. G. Shumard, U. S. A.

TRIAL OF WOORARA IN TETANUS.—Dr. Schuh, of Vienna, had recently under his care a man of twenty-six, whose hand had been shattered by the bursting of a gun. The lacerated wound gave rise to tetanus, and this serious complication was combated by subcutaneous injections with a solution of one grain of woorara in 140 drops of spirit, the quantity of the injected fluid being gradually increased. Some alleviation was obtained after about three grains had been used, but the patient died ten days after the accident.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 12th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	41	58	99
Ave. mortality of corresponding weeks for ten years, 1853—1863,	32.9	36.6	69.5
Average corrected to increased population	00	00	76.09
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
14	10	4	8	0	1	3	0

NOTICE.—Receipts for money received by mail are forwarded to subscribers in the first number of the JOURNAL issued thereafter. On failure of finding such receipt, subscribers are requested to notify the Publisher immediately.

PAMPHLETS RECEIVED.—Transactions of the Eighteenth Annual Meeting of the Ohio State Medical Society, held at Ohio White Sulphur Springs, June, 1863.

MARRIED.—At Abington, Dec. 2d, Luther M. Lee, M.D., of Randolph, to Miss Mary W. Whitmarsh, of Abington.

DIED.—In Waltham, Dr. Ebenezer Hobbs, 69 years.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 12th, 99. Males, 41—Females, 58.—Accident, 1—apoplexy, 2—inflammation of the bowels, 1—disease of the brain, 1—bronchitis, 3—burns, 2—consumption, 14—convulsions, 4—croup, 10—diphtheria, 3—dropsy, 5—dropsy of the brain, 2—dysentery, 1—erysipelas, 1—exhaustion, 1—scarlet fever, 4—typhoid fever, 3—gangrene, 1—gastritis, 2—disease of the heart, 3—hernia (strangulated), 1—infantile disease, 3—intemperance, 1—laryngitis, 2—inflammation of the lungs, 8—marasmus, 3—metritis, 1—old age, 3—paralysis, 3—rheumatism, 1—scrofula, 1—disease of the spine, 1—syphilis, 1—inflammation of the throat, 1—unknown, 5.

Under 5 years of age, 40—between 5 and 20 years, 12—between 20 and 40 years, 16—between 40 and 60 years, 12—above 60 years, 19. Born in the United States, 64—Ireland, 24—other places, 11.

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CASE OF PELVIC CELLULITIS.

[Reported to the Boston Society for Medical Improvement, Nov 23d, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY W. C. B. FIFIELD, M.D., DORCHESTER.

DURING the night of Saturday, Aug. 22d, 1863, I attended Mrs. C., aged 23, in her first confinement. She was delivered of a female child after an easy labor of about six hours. Mrs. C. remained quite comfortable until the 25th, although somewhat teased by her inability to nurse the child satisfactorily, her nipples being quite flat. As the breasts were distended and hot, a saline purge was ordered with good effect. On the 27th, owing to my illness, she was visited by Dr. Cushing, to whom she complained of pain in the right groin. A ginger poultice was ordered, with relief to the pain. On Sunday, the 30th, I visited her, and found her complaining of dull pain in the groin, with tenderness on pressure, and inability to extend the right thigh and leg without pain. The child had sickened, and in a few days it died, as it seemed, from being unable to extract sufficient nutriment from the mother's breasts. At my visit, Sept. 2d, the patient still complaining of pain in the groin, a dozen leeches were applied, with complete relief to the pain, the inability to completely extend the leg without pain remaining. From this time till the 15th of September, she remained tolerably comfortable, with the exception of occasional diarrhoea, which was checked by appropriate remedies.

At this time the pain returned in the groin with some severity, extending nearly to the lumbar vertebræ. Upon deep pressure, a long, hard tumor could be detected, commencing near Poupart's ligament, and rising above the crest of the ilium. It seemed to fill the space between that process and the last ribs. The patient complained of night sweats. Pulse 112, feeble. No appetite. The thigh was flexed on the pelvis, and could scarcely be extended, even to a slight degree, without great pain. It was especially painful and difficult for the patient to attempt to gain an erect position, as in getting out of bed, which was seldom done. No tumor could be

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detected by vaginal examination. A large blister was ordered to be applied to the whole of the tumor; morphia, to procure sleep at night; acid. sulph. aromat., gtt. xx., thrice daily; nourishing diet.

16th.—Pain in flank and groin entirely relieved, but patient complains of most violent strangury, for the relief of which laudanum and starch injections were ordered, with diluent drinks of gum Arabic, flaxseed, slippery elm, &c.

17th.—No relief of strangury, which is quite distressing. Catheter passed, relieving patient for nearly two hours, when the strangury returned with violence. Laudanum injection.

18th.—Strangury remaining much the same, I ordered the following mixture, in teaspoonful doses, three times a day: *R.* Bal. copaibæ, spts. nit. dul., aa \mathfrak{z} i.; muc. gum. acacia, \mathfrak{z} i.; spts. lavend. com., \mathfrak{z} ss. *M.*

19th.—Strangury relieved.

From this date until Oct. 1st, no severe pain in the groin was complained of, except on pressure, though the thigh could not be extended. The tumor became better defined, but gave no signs of approaching the surface. Friction with ointments, particularly of the iodide of lead, was used. Nourishing diet. Porter and wine freely given. Morphia at night. The pulse remained rapid and feeble. Appetite very deficient. The patient remained confined to the bed, rising once or twice daily. Vaginal examinations detected no tumor.

Oct. 1st.—My patient had risen from bed and lain upon the lounge for a few minutes, when she told her mother that her monthly turns had come back profusely. Examination showed the underclothes drenched with matter, and pus flowing from the vagina. All pain ceased, and a raging appetite appeared. Convalescence progressed steadily until the 11th of October, when she again complained of violent strangury, the urine showing a plentiful deposit of pus. A catheter being passed, several spoonfuls of pure pus flowed from its extremity, showing, I think, conclusively, that the abscess had burst into the bladder. Pulse rapid, and only detected by the most attentive examination. The former mixture ordered. Brandy and porter freely given. Good diet. The strangury passed away gradually; strength returned, and on the 18th she was removed in a carriage to Pawtucket. She has since returned to Dorchester, I believe in very good health.

The best practical essay with which I am acquainted, on the subject of pelvic cellulitis, is contained in a very valuable book entitled "Clinical Memoirs on Diseases of Women and Children," by Dr. McClintock, late Master of the Dublin Lying-in Hospital. A short *résumé* of the results of his experience may be acceptable to those who have not seen it. In regard to the seat of the disease, says Dr. McClintock, "it may affect almost any part of the cellular tissue adjacent to the uterus; in the broad ligament, in the iliac

fossa, between the bladder and abdominal parietes, or between the uterus and rectum. Sometimes the tumor extends considerably above the crest of the ilium, and at others is only discoverable by vaginal examination." Though sometimes very exhausting to the patient's strength, and always tedious in its progress, still the disease seldom ends fatally (referring to cases following confinement). Of seventy cases under his care, but two so terminated, and in each of these the immediate cause of death was dysentery, in consequence of the abscess bursting into the colon. The complaint is a more common sequence of first than of subsequent labors. Of sixty-one cases, twenty-eight were primiparous women. Whether a primary or secondary affection, it seldom makes its appearance after the month of childbed is passed over. The sex of the child, age of the woman, whether she suckles or does not suckle, have, in Dr. McClintock's opinion, no influence on its production, who thus differs from M. Grisolle and Dr. Bennet, who state that "one of its most frequent causes is the sudden arrest of lactation, however it may originate." In most cases the tumor is discoverable by external examination, but in others, though no tumor can be felt externally, yet internal examination reveals the existence of tumefaction adjoining the cervix. The duration may extend over weeks and months, and is divided by Dr. McC. into three stages: "The *acute*, marked by hot, dry skin, furred tongue, thirst, frequent pulse—100 to 120—with hypogastric pain and tenderness. The *sub-acute* or *chronic*, when the fever has abated, the pulse 90 or 96 and the pain nearly subsided, the patient weak and languid, no appetite, night sweats. Little pain is felt when at rest, but when pressure is made, morbid sensibility exists. Inability to extend the thigh of the affected side is a symptom occasionally present, and is a source of much annoyance. It is most remarkable when the patient is on her feet, for then not only is the thigh flexed, but the trunk is bent forward. When she is in bed and lying on the side affected, she finds that she can with the least pain stretch down the thigh." Our author agrees with Churchill that when this is present, the sub-serous cellular tissue covering the psoas and iliacus muscles is engaged. He ranks it among the unfavorable prognostics of the disease, as cases where it was present were among the worst, all ending in suppuration, and one fatally. The disease may become entirely chronic, the tumor hard, well defined, and, if large and extending above the crest of the ilium, may be mistaken for an ovarian tumor. It may now terminate in resolution or suppuration. If the latter, there is a return of pain, great increase of tenderness, acceleration of pulse, anorexia, emaciation, chills and night sweats. If this stage be long continued, the patient may be reduced to a state of great marasmus, from which recovery would seem impossible. Suppuration having been established, pointing may take place, 1st, externally in (*a*) the iliac, (*b*) the inguinal (below Poupart's ligament),

(*c*) the supra-pubic, or (*d*) the perineal region; 2d, it may burst into the colon or rectum; 3d, into the vagina; or, 4th, into the bladder. He has never known a puerperal pelvic abscess to burst into the peritoneum. Of the frequency of abscess in puerperal pelvic cellulitis, the clinical records show the following results. Of seventy cases, thirty-seven ended in suppuration. Twenty-four of these burst or were opened externally; twenty in the iliac region, two above the pubes, one in the inguinal region, one beside the anus, six per vaginam, five by the anus, and two by the bladder. In regard to vent being had externally or internally, Dr. McC. believes that the former terminate more favorably, though he differs from other writers.

M. Becquerel, one of the latest, says: "The opening which takes place directly external is in general a circumstance more hurtful than the opening into an organ communicating with the exterior, the suppuration goes on longer, weakens the patient more, and is more frequently complicated with alteration of pus and with putrid infection." In regard to return of the catamenia, it is not to be expected during the active continuance of the disease. It has occasionally come on towards the close of the chronic stage, and is then to be esteemed a most favorable symptom. The cases in which it occurred all ended in recovery, and had no relapse. Of the influence which pelvic cellulitis may have on the capability of the patient to bear children, or cause future labors to be difficult or badly recovered from, the author believes it to be null. Of seventy cases, nineteen became pregnant, some once, twice and three times afterwards. All went the full time, had good labors, and with one exception recovered favorably. Two of these women had had cellulitis ending in abscess discharged externally, or into the vagina, rectum or bladder. In regard to opening these abscesses, the author says that if they point externally, an artificial opening should be made, but not until the matter is near the surface. It is not necessary to wait until the skin becomes adherent to the tumor, though advisable. If the abscess tend towards the vagina, is prominent, distinctly fluctuating, and causing much distress, the bistoury may be used. But in the ordinary run of cases, it is better to let it burst of itself when pointing in this situation. Dr. West says:—"The attempt to anticipate by puncture the exact route the pus may take, is frequently unsuccessful and not always safe."

THE operation of ligature of the subclavian artery was performed on the 20th ult., for axillary aneurism, by Dr. Armsby, of Albany. The latest accounts state the results to be thus far favorable, with every prospect of a successful issue.

PRESERVATION OF CARIOUS TEETH BY FILLING.

[Read before the Suffolk District Medical Society, November 28th, 1863, and communicated for the Boston Medical and Surgical Journal.]

By ENOCH C. ROLFE, M.D.

It is to be feared that in the abundance, cheapness and beauty of artificial dentures, the importance of preserving the natural teeth will be overlooked. There is a large class of dentists who pay little or no attention to dental surgery. They have devoted a few months to learning to make artificial work, and to extract teeth—or break them off—and this is the extent of their knowledge of dentistry. If a tooth is painful they advise its removal at once.

Physicians too often lend their sanction to this method of disposing of diseased teeth. They are constantly meeting patients suffering with neuralgic and other nervous diseases, resulting from decayed teeth. They know that removing them will cure the neuralgia, and they order their removal, without stopping to consider whether restoring health to the teeth would not as effectually cure the neuralgia, and at the same time save the patient the loss of these important organs or the necessity of wearing artificial teeth. It is perfectly surprising to see how indifferent most persons are to the loss of teeth. I think not more than one in ten expresses any regret at it. People dread being hurt, and the fear of being hurt makes them dread having out a tooth. But tell them that it is a great misfortune to lose a good tooth, and they seem surprised, and very often say, "Why, I wish they were all out, and then I could have a new set, handsomer than these."

Just now the nitrous oxide epidemic is causing the loss of thousands of teeth that there is no more necessity for losing than there is for the loss of a finger with whitlow or a foot with chilblain. I admit, with pleasure and pride, that artificial dentures are now so perfectly made in this country that, in many respects, art rivals nature; and in fitting a good set of artificial teeth to a mouth that for years has not known sound teeth, or sweet breath, or comfortable mastication, I feel that the dentist is doing as much for humanity as the surgeon who breaks up the adhesions of a stiffened joint. And yet artificial teeth, as a whole, fall as far short of good natural ones as a "Palmer leg" falls short of a good natural limb; and the loss of a tooth should be treated by doctors and dentists as a calamity to be avoided by all the skill they can command. Bad teeth should be restored to health, or removed. My purpose, however, in the present paper, is only to call attention to two forms of disease, or decay, frequently met with, and too frequently, as I believe, treated by removing the teeth.

The first is where the dental nerve is involved in the decay, but still sensitive, or where the nerve is completely dead; the second, where a tooth has lost a portion of its crown or cutting surface by extensive decay, and may or may not have the nerve exposed. It does not

follow that a tooth must go on decaying until there is no remedy but removal, merely because the nerve is exposed or destroyed. I know many a useful tooth that has had no dental nerve for ten, twelve or twenty years. To effectually prevent the destruction of such a tooth it is necessary that all the decay should be removed and the nerve cavity well and securely filled, so as to keep out all moisture. A tooth thus treated is almost as certain to last for years, as it would be if the same decay had existed and the cavity had been filled in the crown without the nerve having been exposed; but to destroy a nerve, and then fill the crown, without first plugging the nerve cavity, is to leave a closed cavity in the fang, where moisture or pus may collect and produce severe pain. Sometimes this will follow the operation immediately; at other times it will come on after years of entire ease. I have recently seen both these conditions illustrated. A gentleman came to me complaining of great pain in an upper molar tooth. On examination, I found that it had a large gold filling in it, but was otherwise a healthy-looking tooth. He stated that just a week previous he had been to another dentist, and had the nerve of this tooth killed and the cavity then filled; that immediately after, it commenced aching, and had not been easy for an hour, hardly for a moment, up to the time of his visiting me. As I could see no other explanation of the pain, I expressed my fears that the nerve-cavity had not been plugged. He said the dentist who filled the tooth told him that he filled the root, and made an extra charge for it. I advised him to have the filling removed and have it tried again, but at this he seemed angry, accused me of a desire to get a fee out of him without doing him any good, as the other dentist had done, and said several things not complimentary to dentists generally. This left me no alternative but to remove the tooth. On examination, I found one fang quite black, and upon inserting a small probe into it, pus was forced out, but no gold was found. I was satisfied, and the patient professed to be, that if the nerve-cavity had been well plugged at first, his tooth would have done well, or that if he had followed my advice and had the filling removed, it might have been saved.

Another man called about the same time, complaining of severe pain in a tooth that had been filled about five years before, with amalgam. The nerve had been killed, but the nerve-cavity had not been filled. Until within a week, he said, he had not had the slightest trouble with it; the tooth had felt as well and been as useful as any tooth in his head. On removal, the fangs were found blackened and filled with pus.

The simplest method of destroying a nerve is to apply a minute quantity of arsenical paste, composed of equal parts, by bulk, of arsenic and sulphate of morphia reduced to a creamy paste with creasote. A bit of cotton as large as a millet seed, saturated with this paste and placed in contact with the exposed end of the nerve,

will destroy it in from four to twelve hours. With children and young persons, four hours is long enough. As soon as the cautery is complete, the cotton should be removed and the cavity well rinsed with warm water. After a day or two the dead nerve should be removed, and if there is no soreness in the tooth or gum, the nerve-cavity may at once be plugged. It should be filled to as near the end of the fang as possible, and with gold. It is almost impossible to get anything but gold in, unless the nerve has been a long time dead and the cavity has become enlarged by decay. The best dentists recommend filling nerve-cavities with gold, even where the crown is to be filled with amalgam. After filling the fang to the floor of the crown-cavity, it is often desirable to wait for a few days before completing the operation, particularly where the teeth are sensitive, or where alveolar abscess has ever existed. So much and so long pressure at one time would be very likely to bring on inflammation, and perhaps suppuration. Two or three days after, or a week if very tender, the crown may be filled with less danger. Where there is no danger of inflammation, I am in the habit of doing the whole operation at one sitting. In this way I have saved many teeth that were brought for extraction. In not a few of the cases the patient has had so little faith in the operation that I have been obliged to refuse to extract before consent could be obtained to make trial of saving the tooth; and yet with all this want of faith, less than one case in twenty fails, where the treatment has been, as I have described, with gold. Unfortunately for themselves, and for the success of these operations, many persons, some from poverty, others from meaner motives, cannot or will not pay for gold, but are willing to try the experiment with amalgam or some other cheap filling. I never fill a good tooth with anything but gold, without first saying all that the circumstances will warrant against it; but rather than extract such a tooth I sometimes use tin, amalgam, or the oxy-chloride of zinc. As the nerve-cavity cannot be filled with any of these, it leaves the same liability to inflame and suppurate that I have before mentioned. Yet with all this liability, more than half the cases so treated for the last five years have not given the patient trouble.

Of all the cheap fillings, I prefer amalgam where the tooth is so far out of sight that the color is not an objection. The American Dental Association, some years ago, passed resolutions against the use of amalgam, but a year or two subsequently these resolutions were repealed. It is much better to save a tooth, even for a year or two, with amalgam, than to lose it, particularly where mastication depends upon it, as is quite often the case.

[To be continued.]

THE NORMAL AND PATHOLOGICAL HISTOLOGY OF THE KIDNEYS.

By V. RASMUSSEN.

PASSING over the normal histology, which the author goes into at considerable length, of the renal vessels, the renal parenchyma, and the interstitial connective tissue, we proceed to notice the pathological changes in the kidneys referable to the term "Morbus Brightii," as they are described.

The author prefaces his remarks on this subject by observing—"In studying renal diseases, the object of our investigation is to establish the three following points:—1. What tissue or tissues are affected (vessels, parenchyma, or interstitial connective tissue); 2. Whether only the cortical substance or the pyramids are attacked, or both together; and, lastly, 3. Whether the affection is partial or diffused. In the commencement a definite tissue can always be indicated as the starting-point of the affection; later this is most frequently not possible; the several tissues are dependent on each other, so that they are often consecutively attacked; but, on the other hand, the several lobuli possess also independence of each other, and we have already seen that the vascular system of the cortical substance and that of the pyramids are to a certain extent independent of one another. It is especially chronic affections of the kidney which will be the subject of our consideration in an anatomico-pathological point of view. Formerly these were comprised under the name of 'Morbus Brightii,' but this is a very inaccurate denomination, and one which conveys but little information. The older investigators properly included under this term only what we now call parenchymatous nephritis, whose terminal stage is the characteristic and striking granular atrophy. Although this form is by far the most frequent, modern researches have revealed other pathological changes in the kidneys, which clinical physicians have not yet succeeded in definitely diagnosing from the parenchymatous nephritis; and it becomes, therefore, necessary to refer to these also the designation 'Morbus Brightii,' so far as such a name shall be retained as a common denomination for these extremely different conditions. The essential symptoms are the albuminuria and the diminished secretion of urine, while the so-called fibrin cylinders have not the signification which Frerichs ascribes to them; they occur, at all events, only in the parenchymatous nephritis, and not even constantly in that. Here are three essentially different affections to be considered, each occupying its own tissue—1. The amyloid degeneration of the kidney; 2. The parenchymatous; and 3. The interstitial nephritis. They may complicate one another; nay, all three may be present at once; sometimes one, sometimes another occurs first, but the parenchymatous is most frequently the primary affection.

Rasmussen then proceeds to consider the above-named three affections.

The amyloid degeneration can only *very rarely* be recognized without having recourse to the chemical reaction (*i. e.*, by the microscope alone), owing to the limitation of the disease to the vessels, to the exclusion of the parenchyma, and also to the fact that the disease is most frequently combined with parenchymatous or interstitial nephritis, or the interstitial fatty kidney, especially in people who have died from the discrasia of syphilis or of the mercury by which it may have been treated. The author observes, that in the amyloid kidney we may or may not have a lardaceous or waxy appearance, that in very extreme cases of degeneration we may almost certainly detect this amyloid condition by the glomeruli assuming a whitish-grey, shining, enlarged, and prominent character, which appearance is also assumed by the "vasa afferentia," and other neighboring arteries. As regards the vessels which are affected, it is asserted to be the small vessels, and in this order: "first and foremost, the glomeruli and vasa afferentia, next the vasa efferentia and the capillaries in the cortical part, and, finally, the 'arteriolæ rectæ'"; rarely are the large vessels affected, and it is long before other tissues become so.

Owing to the peculiar deposit affecting the vessels and glomeruli, the supply of blood becomes diminished, the cortical substance anæmic, while the hyperæmia increases in the pyramids, and hæmorrhage occurs at times, owing to increased pressure on the inelastic vascular walls, giving rise to reddish or brownish streaks or spots. This thickening of the vessels, &c., from amyloid, is not to be confounded with the thickening which results from a change corresponding to the "so-called end-arteritis," by which organization of newly-formed elements and subsequent atheromatous and fatty degeneration is produced, chiefly, indeed, in the larger vessels, but at times affecting the glomeruli. This fatty degeneration commences with an increase of nuclei of the capillaries, which divide, become separated, and thus elongate the loops in the glomeruli without increasing their calibre. If the process advances, small fatty particles accumulate around the nuclei, and increase with disappearance of the nuclei. Thus a whole glomerulus may degenerate, and the same result be produced as if we had amyloid degeneration. Such a fatty degeneration of the glomeruli may, microscopically, simulate amyloid, but the reaction and microscopic appearances soon discover the difference. The author gives in detail the best method of obtaining the chemical reaction of amyloid.

As respects the "*parenchymatous nephritis*," the author, after alluding to the relation of the epithelium of the renal canals to the urine, and to the fact that the cells in the convoluted tubes are larger and richer in albumen than those in the straight ones, points out that any disease of the former rendering them inactive will be of more serious import than disease of the latter, producing an actual change in the urine; and in consequence of this distinction he

establishes two forms of parenchymatous nephritis, the "papillary catarrh," or catarrhal nephritis, and the *proper* parenchymatous nephritis.

The *Papillary Catarrh*, situated in the straight canals and papillæ, and comparable to the bronchial catarrh, is often continued from the bladder or urethra, but may be caused by external agents, as the use of cantharides, acid diuretics, and alcoholic drinks. It is often complicated with parenchymatous nephritis, and may be the starting-point for it. *Post-mortem* examination shows the affected canals and papillæ to be attended by a whitish or yellowish striation, with hyperæmia of intervening vessels; and when the disease is owing to internal remedies, hyperæmia and bloody ecchymosis over the whole kidney exist. If the disease continues long, the distended urinary canals press on the bloodvessels, and thus the hyperæmia ceases. The disease is mostly limited to an abundant and varied production of cell-growth (nucleated, club-shaped, or fusiform, and, it may be, ramifying), mixed with mucous catarrhal products; but a process may exist, as in the acute forms, like that of the proper parenchymatous nephritis, with fatty metamorphosis and destruction of epithelium.

The *proper Parenchymatous Nephritis* is described (after Virchow) as an hypertrophy of the cells of the convoluted canals, which take up large quantities of the albuminates, become distended, turbid, granular, and adhere closely together; subsequently the cells vanish, and the granular fatty mass becomes free, forming the "inflammatory globules." The author describes three stages of the affection (which he parallels with pneumonia), which may all be going on simultaneously, and delineates the anatomical characteristics of each one. This affection often co-exists at a later stage with intestinal nephritis. In the second stage (that which, when papillary catarrh exists, as nearly as possible constitutes "Bright's kidney"), the retardation of the venous blood is described, and the consequent thrombus, and the continuation thereof to the vena cava and heart, and also transmission into the lungs. The third stage described is, in fact, a resolution or recovery, and corresponds to the complete fatty metamorphosis of the cells, generally, but not always, with loss of substance, induration, granulation, and formation of cysts in connection with the urinary canals. The interspaces between the granular elevations of the surface are ascribed to the empty collapsed canals, which, owing to their pressure on the vessels having ceased, are often of a reddish color; and the author points out that this granular atrophy is not analogous to cirrhosis of the liver, inasmuch as it is the parenchyma itself which is first affected, and only subsequently complicated with intestinal nephritis; whereas in the case of the liver it is not the hepatic cells which are first affected, but the inter-acinous connective-tissue. In the third stage the glomeruli are described as generally small, corru-

gated, surrounded by thickened capsules of connective-tissue, and possibly (as also the epithelium) in a fatty state, sometimes amyloid, and sometimes calcareous.

In the *interstitial nephritis*, the change in the interstitial connective-tissue may preferentially affect the intercellular substance, which becomes hypertrophied, whilst the cells only become slightly increased in number, though they become larger, or the cells may multiply by frequent subdivision, whilst the intercellular substance is not much increased; and if this condition is very extreme, suppuration is the consequence. A third but rarer result is the interstitial fatty kidney, when the newly-formed connective-tissue passes into fatty degeneration. In the first and lower degrees of the second form, the connective-tissue contracts around the canals and glomeruli, and the circulation is more or less obstructed; the interspaces become increased, the urinary canals slender and sometimes constricted in a bead-like manner, and the tunica propria is often thickened and streaked; and the glomeruli are seen small, homogeneous, and in a more or less fatty state. Other interstitial changes, which might be mistaken for the above, may arise from venous stages in the kidneys, in diseases of the heart, or from increase of the capillary nuclei, which may be mistaken for the nuclei of connective-tissue. The author specially mentions a form of interstitial nephritis affecting the pyramids, or circumscribed (syphilitic), in which depressions and cicatrices form not unlike those from hæmorrhagic infarctions.

In the *interstitial fatty kidney* (which is rare) the organ is large and flaccid, and is full of yellowish or whitish striæ and marks, and there is often amyloid or parenchymatous nephritis; the urinary canals are of diminished calibre, and separated far by fatty masses; the glomeruli, and generally the walls of the vascular cells are fatty or amyloid.

As respects the albuminuria of chronic renal affections, the author supposes that the albumen is transuded from the intestinal capillary net-work, owing to the increased lateral pressure, as especially when the afflux of blood is arrested; for example, when the renal vein is tied. He supposes, however, that to a certain degree the albumen may be eliminated in the glomeruli or from the large albumen-holding epithelial cells.

Other so-called *fibrin cylinders* are not to be looked on as an inflammatory product. Their origin is obscure, being found chiefly in the straight tubes and the pyramids, more rarely in those of the cortex, and scarcely at all in its convoluted tubes; also often in the constrictions and small cysts. They scarcely ever consist of fibrin, but are analogous to the so-called colloid mass. Those occurring in papillary catarrhs are formed of mucin. The author seems inclined to look on these cylinders (with Key and Virchow) as depend-

ent on changes in the albumen of the epithelial cells.—*Edinburgh Med. Journal*, from *British and Foreign Medico-Chirurgical Review*.

THE LATE PROF. CHARLES HOOKER, OF NEW HAVEN, ON DIET.

[From an Inaugural Address by Prof. LEONARD J. SANFORD, M.D.]

It was our friend's custom to devote a few lectures of each recurring course to the consideration of certain topics in medicine and surgery, upon which he entertained peculiar views; and to some of these, on account of their value, as also to show the working of his mind, we shall now refer.

The subject of diet was foremost amongst them, and, in discoursing upon it, he maintained that everybody, whether well or sick, should eat three meals a day, which should be about six hours apart, and taken at corresponding hours, daily; the food to be plain, nutritious, mainly solid, and to some extent consisting of fat meat. In sickness, if the stomach was irritable or the disease under which the patient was suffering was of a sthenic type, he would perhaps omit the use of meat and allow a less quantity of the unstimulating articles of food than the person was accustomed to use in health, but the regular intervals must still be adhered to, and the food must always be mainly solid. A sloppy diet he regarded as bad for a well person, and much worse for one who is sick. In a case where most physicians would direct gruel, animal extracts and jellies, to be used in small quantities at short intervals, he would order crackers or crusts and meat, which were only allowed at the regular meal times, and then, in such quantity as could be conveniently borne. If this allowance did not at once supply all the support which the patient required, he would make up the deficiency by a more bracing medication; but he contended that, by perseverance, a healthy appetite could ordinarily be soon reëstablished, which would render an entire discontinuance of medicine safe at an earlier period than would be possible under the other system of dietetics—in other words, the case would be sooner and more perfectly cured, and with less medicine, with the solid diet, than it could be if slops were fed to the patient. This regimen, it must be admitted, proved very successful in Dr. Hooker's hands; his best results from it were in cases of typhoid fever.

But, in the use of aliments, his strongest leanings were towards fat meat; he recommended it to all well persons, as being indispensable to the preservation of health, and insisted on its employment, as the stomach would bear, in all chronic cachectic cases. In the latter, it was a *sine qua non* to recovery, and so he was inflexible in directing its use. A question which he was sure to put to every walking case of sickness that applied for his assistance was,

"do you eat fat meat?" and in prescribing for such patients he would sooner have dispensed with medicine than omitted the fat meat, provided, always, that the stomach could be brought to tolerate it.

It is not strange that our friend should have been pertinacious on this point, for a long course of observations extending over a large region of country, had enabled him to establish the following conclusions:—

I. "Of all persons between the ages of fifteen and twenty-two years, more than one fifth eat no fat meat.

II. "Of persons at the age of forty-five (at which time, and for several years after, the health is generally most uniform and sound) all, excepting less than one in fifty, habitually use fat meat.

III. "Of persons who, between the ages of fifteen and twenty-two, avoid fat meat, a few acquire an appetite for it and live to a good old age, while the great proportion die with phthisis before forty-five.

IV. "Of persons dying with phthisis, between the ages of fifteen and forty-five, nine tenths, at least, have never used fat meat."

When Dr. Hooker's broad views on the subject of oily food were first announced, the profession was startled, and so unpalatable did they seem that we have been slow in putting them to the test; but so far as the trial has been fairly made, results favor the conclusions at which he arrived, and I cannot resist the conviction that the time is coming when the profession generally will conform, more or less closely, to this dietetic practice.

From what has already been stated, it will be inferred that Dr. Hooker regarded temperance in the use of fluids as essential to the preservation of health. He held that their excessive use weakened the stomach and gave rise to indigestion, and dyspepsia with all its train of evils; also, that the functions of the liver were deranged thereby, and further, that the blood becoming dilute, the individual was predisposed to dropsy and hæmorrhage, and to a variety of diseases incident to defective nutrition; and, moreover, he believed that intemperance in the use of alcoholic stimulants, in some instances, was excited by copious water-drinking. It is a well-known fact that the more a person drinks (beyond a certain quantity) the more he will desire to drink, the explanation of which is, that the water, by diminishing the secretion of the saliva, and washing away from the mouth and fauces the small quantity which is secreted, causes those parts to become dry—the individual of course experiences thirst, and finding no permanent relief from a recurrence to water (which is not strange, for the cause of any suffering can seldom accomplish its cure), naturally enough resorts to something stronger; the alcoholics are tried, their use is persevered in, and ere the victim is aware, he is possessed of an irresistible appetite for liquor. Thus does water drinking lead to rum drink-

ing, according to Dr. Hooker, and the explanation is not merely a theory, it has foundation in fact, for he could cite illustrative cases which he *knew* were applicable. He considered a quart of liquids in the twenty-four hours as an outside allowance for any person, without regard to the season of the year; they were to be used only with the meals, and in about equally-divided quantities.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Nov. 9th.—*Dropsy of the Fallopian Tubes and Ovaries.*—Dr. ELLIS showed the specimen. The patient, an intemperate woman, 34 years old, had been married twelve years, and a widow for eight years, but had never become pregnant, although menstruation had, until late, been quite normal.

She entered the Hospital on the 12th ult., having suffered for three months with amenorrhœa and hæmaturia, with frequent micturition, hemicrania, constipation, thirst, occasional vomiting, and, on two occasions, copious epistaxis; and for three weeks with rather hard, paroxysmal cough. She was pale, weak and rather thin, with a small, frequent pulse. The urine was quite albuminous, and contained a few granular casts and considerable blood, but this last soon disappeared and did not return. She improved in many respects after entrance, but the cough continued to trouble her, and on the 19th ult. she had an attack of orthopnœa, with urgent, choking cough, mucous, bloody expectoration, and the physical signs of œdema or congestion of the lungs. More severe and prolonged attacks followed, and the patient finally died on the 6th inst. Œdema of the lower extremities had been noticed the last week of life, and three days before death there was a double friction-sound over the heart, with increased dullness on percussion. At this time the abdominal tumors were detected, the duration of which is entirely uncertain.

On opening the abdomen, two large bluish cysts were seen projecting up from the pelvis into the abdomen. They lay beneath the peritoneum, by which they were confined. That on the left side had pushed the sigmoid flexure upwards. The rectum lay between the two. They measured perhaps six inches in diameter, had very thin walls, and were apparently filled with serum. The Fallopian tubes gradually enlarged after leaving the uterus, became more or less tortuous, and finally terminated in the sacs; pressure upon the latter rendered the tubes tense. No ovaries were seen.

The kidneys were quite small, their cortical substance mottled, granular and thin. On microscopic examination, but very few tubuli were seen, and these appeared shrunken and deformed. Some free fat was seen, but none within the tubuli. There was a much larger amount of fibrous tissue than usual.

The lungs were cedematous. The upper part of the right one was congested. The right pleural cavity contained nearly a pint of serum.

There was recent pericarditis, and general hypertrophy and dilatation of the heart, which weighed one pound and one ounce.

Dr. ELLIS remarked that Gross, in his *Pathological Anatomy*, says, "De Haen relates an instance in which the tube weighed seven pounds, and the cavity contained nearly four gallons of fluid; and a still more extraordinary one has been detailed by Mme. Boivin."

Nov. 23d.—*Dislocation of the Hip, in a Female*.—Dr. CABOT reported the following case:—

An Irish woman, 36 years old, was brought to the Hospital, Nov. 18th. She stated that as she was descending a flight of stairs, with a pail of water in each hand, she slipped upon a piece of apple-peel, and fell down the entire flight, bumping on several stairs as she went, and striking upon her left hip on the landing below. She was unable to rise without assistance, and was confined to her bed ever since. The accident occurred twenty-five days previously, no treatment having been adopted in the interval. Her condition at entrance was as follows:—she was in bed, the left leg flexed, the knee very much inverted, and resting across the right thigh just above the right knee. There was tenderness on pressure about the left hip and groin, and the slightest attempt to rotate or flex the thigh caused pain. Eversion and abduction of the thigh were not possible. The left trochanter was less prominent than the other, and higher up. The head of the femur was felt on the dorsum of the ilium. When the patient stood up the inversion was very marked, much more so than in dislocation on the dorsum in male subjects.

November 21st, twenty-eight days after the accident, the patient was etherized, and the dislocation was made out to be dorsal, with the head of the femur probably under the obturator muscle. An attempt at reduction was made by the flexion method, so called. A snap was heard, and the head of the bone was found to be below the socket. By reversing the manœuvre by which the head of the bone passed below the socket, it was carried directly behind the latter, and, the leg and thigh being flexed, and force applied in such a way as to lift it upwards, a slight manœuvre was sufficient to throw it into the socket, where it remained, with the limb in a nearly normal position. The movements of the leg were perfect; the thigh remained slightly flexed upon the body, owing to the permanent contraction of the muscles of the thigh and pelvis. The knees were tied together, with a cushion between them, and the patient was put to bed. There was a moderate amount of pain and soreness after the operation—much less than would have been expected. The patient was allowed to sit up for the first time Dec. 10th, and was free from pain and soreness.

Dr. CABOT said that Dr. Woodward, of Quincy, had seen two cases of dislocation of the hip in females, and at Dr. C.'s request had furnished him with the following account of them:—

"QUINCY, Dec. 12th, 1863.

"DEAR SIR,—In conversation with you on dislocation of the hip-joint, I observed to you that I had seen two cases of that accident in females. As the accident to females is so rare, you requested me to relate the cases to you, so far as my memory would serve me.

"The first case occurred fifteen or more years ago, and I shall not be able to state all the minute points of the case, but I think I can give you symptoms enough to satisfy you that it really was a disloca-

tion, and not a fracture. A woman, between fifty and sixty years of age, as I should judge, was riding in an open wagon through Quincy. The horse took fright, and threw her from the wagon into the street. She was taken up, and carried into a house, and I was sent for. I found that she was unable to move her left leg; that the limb was shorter than the other, and that I was unable to rotate or elongate it. The direction of the foot I do not at present recollect. Being uncertain what the accident might be, I sent for Dr. Ware, of Milton, who concluded with me that it was a dislocation of the hip-joint upwards. We accordingly proceeded to set the bone, which, with the assistance of two or three strong men, we succeeded in doing. The limb became in length equal to its fellow, and remained so, by simply tying the ankles together with a handkerchief. Some inflammation took place, which required depletion, and the woman was removed in eight or ten days to her home without any inconvenience."

"The second case is of a lady, now residing here, who fell, some years ago, from the cellar stairs sideways, while reaching for something, to the bottom of the cellar, on her hip. She was forty-eight years of age. I found her removed to her bed, with her right limb shortened, and the foot turned outwards. By extension I could not restore the natural length of the limb. Before I dressed the leg, or attempted to replace it, she requested me to consult her friend Dr. A., of your city, who accordingly visited her, and after examination concluded that there was a dislocation on the pubis. But so doubtful was the case, that no attempt to replace the limb was made that evening. On the following morning I visited her alone, applied Jarvis's adjuster, replaced the limb, and tied the ankles together. The next morning, when Dr. A. visited her with me, he said that the bones were now in their right place. Considerable fever ensued, and the woman, although the limbs are of equal length, still limps, from some injury done to the socket I presume. From the symptoms related above, I think we must conclude that dislocation of the hip-bone took place in both these cases. Your friend,

"To S. CABOT, M.D., Boston.

E. WOODWARD."

The SECRETARY stated that Dr. John O. Stone, of New York, had met with a case of dislocation of the hip in a female. The following account of the case was kindly furnished by Dr. Stone, and was read at the subsequent meeting:—

"NEW YORK, Nov. 27th, 1863.

"MY DEAR DOCTOR,—The case you allude to was simply as follows:—During the month of September, 1842, I was attracted by an accident in Broadway. A woman in crossing this street was knocked down by an omnibus. It was evening. She could give no account of the accident, *how* she fell, *where* the omnibus struck her, or in what *position* the thigh was when she met with the accident. She could not walk; the left foot was turned outwards: the knees separated from each other, and the head of the left thigh was felt upon the pubes. I sent her home, and having procured pulleys, visited her at her residence, where I made a more particular examination. The head of the bone could be felt upon the pubes, but the limb was *longer* than the other by a half inch, and when she was raised in the erect position the heel of the dislocated limb touched the ground. In order to in-

investigate these contradictory phenomena, I had her held in the erect position by two assistants. On rotating the limb inwards, the head of the bone moved downwards. On repeating this movement, the head of the bone slipped into its place.

"I then found that my patient had fainted, and that it was during this fortunate occurrence that the dislocation had been restored. The fainting was complete, and continued for twenty minutes after the reduction.

"I was still in doubt as to what it was that caused the dislocated limb to be longer than the other. I then learned that she always limped with the left limb, and that when a child she had had the rickets.

Very truly yours,

JOHN O. STONE."

"To FRANCIS MINOT, M.D., Boston.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 24, 1863.

HUXLEY *versus* OWEN.—The following burlesque, first published in the London *Times*, respecting the ethnological controversy which is at present attracting so much of the attention of the scientific men of Europe, and of which we have spoken in former numbers, is so very amusing that we copy it for the entertainment of those who may not have already seen it.

A *Sad Case*—*Mansion House*—April 23, 1863—(*Before the Lord Mayor*).

T. H. Huxley, well known about the town in connection with monkeys, and Richard Owen, in the old bone and bird-stuffing line, were charged by policeman X. with causing a disturbance in the streets.

The prisoners exchanged glances of such a character that it was thought prudent to keep them separated in the dock.

Policeman X., being sworn, stated as follows:—My attention was called to the prisoners by a crowd of persons, who seemed much excited—they appeared to take sides, and some were for Owen and some for Huxley. On coming near I saw Huxley snapping his fingers at Owen, and telling him he was only a little better than an ape; he seemed very angry, and would have done Owen some bodily harm if I had not been near. He told Owen he had quite as much brains as he had, and he called him some awful names. Must I repeat the bad words, your worship?

Lord Mayor—Certainly. You *must* state what he said.

Policeman X.—Well, your worship, Huxley called Owen a lying Orthognathus Brachycephalic Bimanous Pithecus; and Owen told him he was nothing else but a thorough Archencephalic Primate.

Lord Mayor—Are you sure you heard this awful language?

Policeman X.—Yes, your worship, and some more I could not exactly understand.

Lord Mayor—Did you see any violence used?

Policeman X.—Yes, your worship. Huxley had got a beast of a monkey, and he tried to make it tread on Owen's heels—and said 'twas

his grandfather—and like him—and just the same breed and all that ; and some gentlemen cheered and said “Bravo.”

Lord Mayor—Did you see the man Huxley actually put the monkey on the other prisoner—was there no interval between them ?

Policeman X.—He put the beast so near as ever he could ; he tried to make him go quite close, but he could not, and he kept singing out, “Look at ’em, a’nt they like as peas ?”

Lord Mayor—Did Owen appear much annoyed by this outrage ?

Policeman X.—He behaved uncommon plucky, though his heart seemed broke. He tried to give Huxley as good as he gave, but he could not, and some people cried “Shame,” and “He’s had enough,” and so on. Never saw a man so mauled before. ’Twas the monkey that worried him, and Huxley’s crying out, “There they are—bone for bone, tooth for tooth, foot for foot, and their brains one as good as t’other.”

Lord Mayor—That was certainly a great insult.

Huxley—So they are, my lord, I can show—

Here a scene of indescribable confusion occurred. Owen loudly contradicted Huxley ; the lie was given from one to the other ; each tried to talk the other down ; the order “Silence !” was unheeded ; and for a time nothing could be heard but intemperate language, mingled with shouts of “Posterior Cornu,” “Hippocampus,” “Third Lobe,” &c. &c. When order was restored, the Lord Mayor stated that, in all his experience, he had never witnessed such virulent animosity among costermongers.

The Lord Mayor here asked whether either party were known to the police.

Policeman X.—Huxley, your worship, I take to be a young hand, but very vicious ; but Owen I have seen before. He got into trouble with an old bone man, called Mantell, who never could be off complaining as Owen prigged his bones. People did say that the old man never got over it, and Owen worried him to death ; but I don’t think it was so bad as that. Hears as Owen takes the chair at a crib in Bloomsbury. I don’t think it be a harmonic meeting altogether. And Huxley hangs out in Jermyn street.

Lord Mayor—Do you know any of their associates ?

Policeman X.—I have heard that Hooker, who travels in the green and vegetable line, pats Huxley on the back a good deal ; and Lyell, the resurrectionist, and some others who keep dark at present, are pals of Huxley’s.

Lord Mayor—Lyell, Lyell ; surely I have heard that name before.

Policeman X.—Very like you may, your worship ; there’s a fight getting up between him an’ Falconer, the old bone man, with Prestwich, the gravel sifter, for backer.

Owen—He’s as bad as any of ’em, my lord. I thought he was a friend of mine, but he’s been saying things of me as I don’t like ; but I’ll be even with him some day.

Lord Mayor—Silence ! Have you seen the prisoners in the company of any ticket-of-leave men ?

Policeman X.—No, your worship ; but from information I have received, I believe Huxley is one of the same set with John William Natal, or some such a name, for he is one of those chaps as has got a lot of aliases, who has lately returned from abroad. John’s been kicking up a pretty row, he has.

Lord Mayor—I desire you to bring him before me if you detect him in creating any disturbances.

Policeman X.—Oh! your worship, there's plenty trying to catch him, but he's so artful they can't trap him no how. They wanted to take his ticket from him, but they could not; then they tried to coax him to give it up, but he would not; not he. You see when he was across the water, he took to the bush and got in with the savages, and tried to come over them, but one of the Kaffirs gave him such a top-per that he's never been the same man since.

Lord Mayor—You have not seen them together?

Policeman X.—No, your worship; but I believe they are both tarred with the same brush.

As there appeared to be no case against Owen, he was allowed to be sworn. Hereupon Huxley demanded to be sworn likewise, but Owen objected, declaring it impossible to swear a man who did not believe in anything, and Huxley declared it was equally impossible to swear Owen. Owen, however, was directed to take the book in his hand, whereupon Huxley vociferated, "He does not know a hand from a foot." An angry altercation ensued between the parties, amidst the din of which the words "*peronæus longus*," "*movable toe*," "*thumb*," "*astragalus*," and "*short flexor*," could be distinguished. The Lord Mayor addressed both parties, and declared such violent conduct was scarcely human, at which Huxley laughed and Owen looked grave. He then gave his evidence as follows:—

I knew the prisoner in former years. We were both in the same business, and I looked upon him as a quiet, well-meaning man. But since he has risen in the world, he has become highly dangerous, so much so, that I am willing to believe his conduct proceeds from diseased brain.

Here the Mayor called upon Dick Owen to come at once to the point.

Owen proceeded—For the last two years my life has been a burden to me. That fellow Huxley has got new pals, Charlie Darwin, the pigeon-fancier, and Rollstone, and others of that awful lot; and he waylays me in public, and throws dirt at me. Indeed, he has hit me very much about the head, very hard indeed; and he tries to make believe that I don't know my trade; and that he can teach me; and he tries to make me ridiculous in the eyes of the public, and I can't bear it. And lately I went down to Cambridge, and who should I see there but that Tom Huxley and his low set, and they all attacked me at once—

[Here the Mayor directed the witness to keep to the point.]

Owen continued—I could live well enough, if you could only keep that beastly monkey away from me, and make Huxley hold his tongue about comparing our brains. Indeed, continued Owen, how would you like to be told in public that physically, morally and intellectually you were only a little better than a gorilla?

Huxley was now called upon, and said as follows:—

Me and Dick is in the same line—old bones, bird-skins, offal, and what not.

The Mayor—Do you mean the marine store line?

Huxley—No, your worship; that's Bowerbank and Woodward's business. Well, as I was saying, we was in the same line, and comfortable as long as Dick Owen was top-sawyer, and could keep over

my head, and throw his dust down in my eyes. There was only two or three in our trade, and it was not very profitable; but that was no reason why I should be called a liar by an improved gorilla, like that fellow.

[Here the Mayor cautioned the prisoner.]

Well, in my business I put up monkeys, and the last monkey I put up was Dick Owen's.

[Here the Mayor declared, on the repetition of such language, he would at once commit Huxley.]

Well, as I was saying, Owen and me is in the same trade; and we both cuts up monkeys, and I finds something in the brains of 'em. Hallo! says I, here's a hippocampus. No there ain't, says Owen. Look here, says I. I can't see it, says he; and he sets to worriting and haggling about it, and goes and tells everybody as what I finds ain't there, and what he finds is, and that's what no tradesman will stand. So when we meets we has words. He will stick to his story, your worship, he won't be right himself, nor let any body else be right. As to this here monkey business, I can't help the brutes treading on his heels. If he was to go forward more, why you see he'd be further off from the beast; but he's one of these here standstill Tories, what they call the orthodox lot, as never moves forward. If he'll keep his tongue in his head, why I'll keep mine; but he shan't have the last word, or my name's not Tom Huxley.

[The Lord Mayor having tendered advice to the disputants, they were liberated.]

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 19TH, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	46	58	104
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.2	37.9	76.1
Average corrected to increased population	00	00	83.28
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
18	10	6	8	0	0	2	1

BOOKS RECEIVED.—The Medical Formulary. By Benj. Ellis, M.D. 11th Edition. Philadelphia: Blanchard & Lea.—Synopsis of the Lectures on Materia Medica and Pharmacy delivered in the University of Philadelphia, &c. By Joseph Carson, M.D. 3d Edition. Philadelphia: Blanchard & Lea.—Asthma; its Pathology and Treatment. By Henry Hyde Salter, M.D., F.R.S. Philadelphia: Blanchard & Lea.

DIED.—At Holliston, 17th inst., of congestion of the lungs, Timothy Fiske, A.M., M.D., aged 85 years.—At Salem, 21st inst., Richard H. Wheatland, M.D., 33 years.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 19th, 104. Males, 46—Females, 58.—Accident, 1—anaemia, 3—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 4—cancer, 2—cholera infantum, 1—consumption, 18—convulsions, 3—croup, 10—diedly, 1—diarrhoea, 2—diphtheria, 2—dropsy, 4—dropsy of the brain, 4—scarlet fever, 6—typhoid fever, 2—gangrene, 1—gastritis, 1—haemorrhage (uterine), 1—disease of the heart, 3—disease of the kidneys, 1—congestion of the lungs, 4—disease of the lungs, 2—inflammation of the lungs, 8—marasmus, 1—old age, 3—paralysis, 1—pleurisy, 2—unknown, 4—whooping cough, 1.

Under 5 years of age, 35—between 5 and 20 years, 11—between 20 and 40 years, 17—between 40 and 60 years, 27—above 60 years, 14. Born in the United States, 69—Ireland, 25—other places, 10.

THE

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No. 22.

VARIOUS APPLICATIONS OF THE OPERATION OF IRIDECTOMY.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

BY HENRY W. WILLIAMS, M.D., BOSTON.

THE following cases are selected from among those in which I have performed the operation of iridectomy within the last few weeks, as showing a variety of circumstances in which this operation may be serviceable; sometimes to avert impending blindness, sometimes as an additional security for the success of other remedial measures, sometimes to relieve pain and prevent complete disorganization and deformity in eyes which have already become useless.

Iridectomy, with Extraction of Cataract.—On the 8th of September, 1863, I saw, at Brookline, a young man who had lost the left eye from traumatic injury, and whose right eye had become blind from the gradual increase of congenital opacity of the lens. This eye also exhibited dotted opacity of the lower portion of the cornea and considerable injection of the circum-corneal zone of vessels. These appearances induced me to prefer extraction of the lens rather than an operation for solution, and also led me to perform iridectomy at the same time, as an additional security against the occurrence of internal inflammation. Section of the upper half of the cornea having been made with a cataract knife, a portion of iris was drawn through the wound and excised. The capsule of the lens being next divided, the lens was extracted without difficulty.

The progress of the case was in all respects satisfactory. The corneal section healed rapidly, and the dotted cloudiness at its lower part was favorably influenced by the operation. A month after, he came to me, delighted with the amount of vision he enjoyed, even without cataract glasses. With a glass of four inches focus he saw much better, though not as yet quite as distinctly as after the opacity of the cornea shall have wholly disappeared.

Iridectomy, and Extraction of Secondary Capsular Cataract.—Sept. 9th, 1863, I saw Mr. —, of Iowa, æt. about 23, on whose right

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eye operations for solution of congenital cataract had been performed in New Hampshire, some years since, with the result of complete absorption of the lens, but leaving the pupil still obstructed by the thickened and opaque capsule. A puncture was made in the cornea with a broad needle, and the capsule was extracted from the eye with the small canula forceps. But as, in consequence of firm adhesions having formed between the toughened capsule and the edge of the pupil, the iris was somewhat drawn toward the wound, I deemed it best to excise a small piece of it, towards the inner canthus.

The operation was followed by only very trivial injection of the eye, which passed off in a few days; and resulted in excellent vision, both for small objects and for reading. I have since operated for removal of cataract from his other eye, by solution, with excellent results, no secondary operation being necessary.

Iridectomy subsequent to Extraction of Cataract.—In January last, I extracted cataract from the left eye of Mr. —, æt. 63. The lens was removed without difficulty or accident, the corneal section became in due time firmly united, and he seemed to have successfully recovered from the operation; when, without apparent cause, he began to have deep-seated pain in the eye, renewed injection of the vessels, and an appearance as if the pupil were occupied with purulent matter. Fearing total disorganization of the eye, I administered ether, made a small section at another part of the cornea, and extracted what seemed to be the capsule of the lens, transformed to a thickened stringy mass, like sloughing tissue. The pain was relieved, and the eye once more rapidly improved; but exudative processes had been already set up to such an extent in the iris, that complete anterior synechia was formed, with central opacity of the cornea. There remained, however, good perception of light, and on the 9th of September I performed iridectomy at the lower part of the iris, making an artificial pupil nearly of the same diameter as the natural aperture.

No pain, and only slight injection followed the operation; and notwithstanding the previous symptoms of severe intra-ocular pressure, during the attack I have described, he was able in two weeks to enjoy tolerable vision for large objects.

Iridectomy, after Extraction of Cataract.—The history of this case is not unlike the preceding. In January of this year I operated on a gentleman, 76 years of age, extracting the lens in a manner to promise a very favorable result. On the fifth day, the wound of the cornea was firmly closed, the pupil was clear and vision good. But, two days later, a slight central opacity was observed in the cornea, which increased, began to be accompanied with pain, and inflammation evidently extended to the iris.

On making inquiries, to endeavor to ascertain the cause of this unexpected change, I learned that he had for three months subject-

ed himself to a low diet, in the belief that this reduction of the system was necessary as a preliminary to the operation.

General tonic measures, with local depletion, were at once employed; but some hypopion had already formed, the cornea, without apparently becoming ulcerated, became largely opaque at its centre, and the anterior chamber was nearly obliterated by adhesion of the iris to the inner surface of the cornea.

As the eye had good perception of light, I did iridectomy behind the inner transparent margin of the cornea on the 5th of October. Scarcely the slightest irritation followed, and he soon began to have some vision through the artificial pupil. This has since slowly increased so as to afford useful sight, with a certainty of yet further improvement.

Iridectomy in Glaucoma.—On the 3d of October, 1863, I saw, at Chelsea, a lady of about 65, who had for a week previous suffered intense pain in the left eye, almost precluding sleep, and attended with loss of sight. The pain, as I was informed by her family physician, had been continuous, though most severe on alternate days, and had been only partially relieved by large opiates. On examination, I found much injection of the circum-corneal and other vessels of the globe, abnormal tension, as indicated by increased resistance when the globe was pressed upon, considerable turbidity of the field of the pupil, which was dilated, and its margin pressed forwards, by the crowding of the crystalline lens against the iris. She had no distinct perception of objects with this eye, everything appearing like a white sheet. There could be no question as to the glaucomatous character of the disease.

Ether was given till insensibility was induced. An incision was then made, through the sclerotica, just behind the upper margin of the cornea, so as to enter the anterior chamber at its extreme limit. The iris was then seized with forceps and drawn out, and, after being slightly incised at one end of the wound, it was drawn towards the other extremity of the sclerotal incision, so as to separate it, by tearing, from its ciliary attachments. The segment thus detached was then clipped off, with scissors, close to the external wound; no portion being left to protrude through the incision and thus retard its union.

On recovering from the anæsthesia, she was agreeably surprised to find herself free from the intense pain she had so long endured. This never returned. The subsequent day, the injection of the globe was already less than before the operation, and her vision was so much improved that she could distinguish features. All the morbid phenomena quickly subsided, and on the sixth day she could tell the time by my watch, without the aid of glasses. The loss of substance in the iris having been made at its upper portion, no inconvenience resulted as regards vision; the increased area of the pupil being covered by the upper eyelid.

Iridectomy in Specific Iritis.—Oct. 12th, 1863, I saw, in consultation, a lady who had for months suffered from iritis of specific character; but which she had neglected, after the first severe symptoms had subsided, under the impression that, as she felt no pain, the eyes were doing well.

In the left eye, posterior synechia was complete, and two freshly formed tubercles of lymph indicated that the disease was not disposed to abandon its hold. The iris was bulged forward, like a sail filled by the wind, from the accumulation of aqueous humor in the posterior chamber, and it was evidently necessary to resort to iridectomy to reopen the pupil and avert complete disorganization of the globe.

In this instance, the portion of iris removed was below and towards the nasal side of the closed pupillary aperture; that the artificial pupil might, by its position, allow of vision which would harmonize with that of the other eye. Only so much was removed as would be equivalent, in size, to the natural pupil in a moderate light.

The operation was followed by so great relief from a feeling of tension and uneasiness, that she slept better, on the night following, than for some time previous. Two days after, she could distinguish objects with this eye, which before was quite blind; and vision has gone on steadily improving as the symptoms of inflammation have been removed.

Iridectomy in Glaucoma.—On the 7th of October, 1863, I saw Mrs. —, on whose right eye I performed iridectomy for the relief of glaucoma, with complete success, about a year previous. Vision continued excellent in the right eye; but on the day previous to my seeing her, the left eye was suddenly attacked, and at the time of my visit the symptoms of acute glaucoma were already fully developed. Vision was nearly extinct, the pupil was distended and its field turbid, there was much increase of tension of the globe, and considerable injection.

After consultation with her family physician, it was determined to operate immediately. Ether was given, and iridectomy performed, upwards.

So far from being an annoyance, the operation was a source of immediate relief. The following day, the eye was much less injected, was free from abnormal tension, and vision was returning. From this time more and more sight was regained, and in a short period vision became excellent.

This, and the case of acute glaucoma previously reported in this article, furnish striking examples of the advantages to be derived from prompt recourse to the operation; which seems at once to relieve the ciliary neurosis which probably constitutes the initial symptom of the disease, and which thus arrests the hypersecretion of the vitreous which gives rise to the abnormal and excessive tension.

Iridectomy in Strumous Disease of the Cornea.—On the 23d of October, 1863, I saw Miss —, residing in Western Massachusetts, who had the appearance of robust health, but who bore on her neck extensive scars resulting from glandular suppuration.

For several years she had been subject to disease of the right eye, affecting her only during the warm season, but latterly becoming more and more persistent.

The cornea exhibited large spots of interstitial opacity, there was much injection of the circum-corneal vessels, and the iris was evidently implicated to a certain degree. Much pain, in and around the eye, was complained of, and there was great intolerance of light.

Iridectomy was performed, upwards, and was followed by obvious relief, so that she was able to return home after a few days. Tonics were combined with the local treatment, but the improvement seemed to be immediately accelerated after the operation.

Iridectomy in Glaucoma.—On the 5th of November, 1863, I saw, at Milton, a lady advanced in life, whose right eye had been lost some years previously, from glaucoma.

Six months before my visit, the left eye had begun to fail, and she was at times nearly blind, with occasional paroxysms of severe pain. Vision had become very imperfect, even in the intervals of the paroxysms. The eye-ball was tense and hard, and exhibited a dilated pupil, the field of which was not clear. There was considerable injection of the vessels of the globe, with a dulness and loss of sensibility of the cornea.

Although the symptoms were of considerable duration, there seemed to be every reason for resorting to the operation of iridectomy, which alone offered a chance of relief. Insensibility was therefore induced by means of ether, and upward iridectomy was done.

She was at once relieved from pain by the operation, and all the morbid symptoms vanished with surprising rapidity. The second day after its performance, she was about her house almost as usual, and already found much improvement in her vision. At the end of three weeks she could read an ordinary print, with readiness, with the aid of suitable glasses.

Iridectomy for the Relief of Pain and Tension of the Globe threatening the Loss of the other Eye.—On the 18th November, 1863, I saw Mr. —, blacksmith, of Uxbridge, who lost the right eye several years previously, from the penetration, as he says, of a fragment of iron, which he believes to remain still lodged within the eye.

This eye is frequently red and painful, so that he is obliged to forego his usual labor, and, latterly, he has had occasional attacks of loss of distinct vision, for a short time, in the left eye. Examination with the ophthalmoscope shows floating opacities, of considerable size, in the vitreous, which prevent a distinct view of the fundus of the right eye. There is no appearance of any morbid

growth, or of the formation of a deposit of lymph or pus, or of the presence of a foreign body within the globe. The eye appeared larger than the other, and was abnormally tense.

I advised the patient that it would be better, if necessary, to sacrifice the right eye, which was not only useless but troublesome, rather than to imperil the sound eye by allowing symptoms of sympathetic inflammation to be developed in it; but proposed that iridectomy should be performed, in the hope that this might be sufficient to afford relief from the actual symptoms and to give immunity from sympathetic disease.

Ether was not administered, and after the operation the patient was permitted to return immediately home, a distance of forty miles.

I saw him again eighteen days afterwards, when he expressed himself entirely relieved of all morbid sensations in both eyes. The right eye had greatly improved in appearance, being less tense, and having lost the very considerable injection which existed before the operation.

Iridectomy, with Extraction of Cataract.—Dec. 10th, 1863, I operated for extraction of cataract on both eyes of Mr. —, aged 66.

The lenses, even in their cortical layers, were very hard, and though extracted without difficulty, and under the influence of ether, their removal was followed in each eye by the escape of a small amount of very fluid vitreous humor. There was also a strong tendency to prolapse of the iris through the corneal wound.

To obviate danger of interference with the primary healing of the wound, by the occurrence of prolapsus, I excised, in each eye, a small portion of iris, opposite to the centre of the corneal section.

On the fifth day complete union of the edges of the wounds had taken place in both eyes. The patient complained of no pain, except that occasioned by conjunctival injection, and the pupils were clear.

On the 20th December, his vision was already good for large objects, even without assistance from cataract glasses.

Iridectomy, in Eyes affected with Strumous Iritis.—On the 15th Dec., 1863, I saw a young colored woman from Rhode Island, both of whose pupils had become nearly closed from the effects of an insidious form of iritis, which, without giving her much pain, had caused a deposit of lymph which had not only caused adhesion of nearly the entire margin of the pupil to the capsule of the lens, but had overspread the entire area of the pupillary aperture with a thin layer of lymph, which obstructed vision.

As atropia produced no material effect; and as the obstruction of the pupil had increased since I saw her a short time previously, giving every reason to feel assured that obliteration of the pupils and total loss of vision would soon ensue; I determined to perform iridectomy, so as to form an artificial pupil downwards and inwards

from the position of the natural aperture; placing the two pupils in these situations, as being those best adapted to ensure harmonious vision in the two eyes.

Under the influence of ether, both eyes were operated on, and, notwithstanding extensive adhesions, pupils were established of satisfactory size and form.

On the 16th, the eyes showed less injection than I could have supposed possible, and she was scarcely conscious, from any sensations of discomfort, that operations had been performed.

She returned home on the 18th with the eyes in a satisfactory condition as regarded the newly-formed pupils, and giving promise of excellent vision.

PRESERVATION OF CARIOUS TEETH BY FILLING.

BY ENOCH C. ROLFE, M.D.

(Concluded from p. 415.)

So far I have spoken of teeth with dead or exposed nerves only, without stopping to consider the other conditions of the tooth. The nerve may be exposed, however, while the decay is quite limited, and situated in the articulating surface, where it can be readily filled with common dentists' foil. The treatment of such a case is as plainly indicated, as that for abscess or carbuncle, and yet there are dentists and physicians who insist that extraction is the proper remedy for all teeth with dead or exposed nerves.

The second form of diseased teeth, is where, besides having an exposed nerve, there is loss of a part of the cutting surface or crown of the tooth.

Under most circumstances it may be better to remove such teeth; for instance, where we find such teeth, nearly all the other teeth may be diseased, the gums spongy and otherwise diseased, the teeth covered with tartar, and perhaps alveolar abscess is to be added to the rest. Oftentimes a person may have two, three, or four teeth, that are worth saving, but the others are gone, or too much diseased for cure. Under all the above conditions the best treatment is to remove the whole, and give the patient an artificial set. But it is a very common thing to see patients with one, two or more front teeth badly decayed, while most of the other teeth, and perhaps all, are good, and the mouth and gums in a healthy condition. If these two or three diseased ones can be restored to health and shape, the patient may avoid the necessity for wearing artificial teeth for years, perhaps for life.

Where only one or two front teeth are decayed, if the fangs are healthy, they may be cut off and artificial ones pivoted upon the roots; but pivot teeth are filthy nuisances in the mouth under the most favorable circumstances. Any person who has worn one,

would be willing to pay any reasonable sum to have his old tooth back again, if it could be filled and made clean and healthy. One or two teeth may be attached to a plate, made fast to the other teeth by clasps or springs, or the plate may be retained in place by atmospheric pressure. Either of these is far preferable to pivots, but clasps soon destroy the teeth they embrace, and atmospheric pressure is disagreeable, and a constant drag upon the roof of the mouth.

By plugging from one to half a dozen, oftentimes all these artificial appliances may be avoided, and perhaps severe alveolar abscess or neuralgia cured.

So long as the only form of gold prepared for filling teeth was that known as "dentists' foil," it was hardly possible to restore a tooth, that had any considerable portion of its crown, or cutting surface destroyed, to its original shape, although long practice had enabled some operators to perform surprising cures with this material. Mr. Alfred J. Watts, of Utica, N. Y., has patented a method of preparing gold, which renders it so soft that it can be packed layer upon layer, by pressure, until it becomes a solid mass, equal in density to coin. With this gold, a tooth with a portion of its crown broken away, may be built out to its original shape, if a firm foundation can be obtained to commence upon. His method of preparing is simple. He first dissolves pure gold in nitro-muriatic acid. It is then precipitated with proto-sulphate of iron; this precipitate is washed with hydrochloric acid to remove any peroxide of iron or other impurities, that will thus be washed away. This precipitate is then amalgamated with from four to twelve times its weight of mercury. The mercury is then dissolved out with nitric acid, leaving the gold in the form of a brittle non-coherent mass. It is then annealed, or slowly raised to a cherry-red heat, and it is ready for use.

With gold thus prepared, by careful manipulation, an old broken tooth may not only be restored to its original shape, but its weak parts strengthened, and bound together.

CASE I.—The wife of one of the members of this society, while having an operation performed upon another tooth, called my attention to one of the central incisors, saying she supposed nothing could be done for that, but wait for it to break and then have its place supplied by an artificial one. Upon examination, I found that the nerve was dead and had probably been so for a long time; that about one fourth of the cutting surface upon the lateral side was gone—a little less on the labial aspect, a little more on the palatine, and the tooth much discolored. On cutting into the decay I found that the discoloration could readily be removed. The gums were in a healthy condition; most of the other teeth had been plugged, but were in good condition. I ventured to promise that I could plug it, restore its original shape and nearly restore its color,

and make a useful tooth of it, which would probably last as long as her other teeth.

But I also told her that there was a possibility that the tooth would break in the operation, but that if it would break during an operation, it would soon break any way. She said if she could be sure that it would not break she would not value any money, for she had a perfect horror of artificial teeth, but the idea that it might break frightened her. She left, however, saying that she would hear what the Doctor had to say about it and see me again. She came again in two or three days, saying that her husband advised her to put the case into my hands to do with, just as I thought best. I plugged the root to the apex, restored the crown to its original shape, and left it with nearly as good a color as its mate which was sound. I saw her after three quarters of a year's use; she expressed herself more than satisfied with the success of the operation; said the tooth seemed every way as good as the other, and that no money would induce her to have it put in the condition in which I found it.

CASE II.—Another physician's wife came to me with an under bi-cuspid badly decayed, part of the crown gone, nerve exposed but not dead. This was treated like the first, after killing the nerve. She then informed me she had been to another dentist, who had told her that the tooth was too far gone for any operation but extracting, and rather insisted on removing it at once. She was so unwilling to lose the tooth, that she concluded to seek further advice; her husband sent her to me, and the result is that she now says she would be willing to pay fifty dollars to have one like it filled, rather than lose it.

CASE III.—Mrs. S., a lady from Maine, consulted me about her upper front teeth. Except these four, her teeth were very good. These had been decayed for many years, and were very bad. The centrals were decayed through from side to side, the nerves dead, and the nerve cavities so decayed that they were tunnel-shaped; one third of the cutting surface upon each side was gone. The laterals were about as badly decayed upon the central side, but sound upon the cuspid portion; nerve cavities not so badly decayed. With one she had had alveolar abscess frequently; these teeth were all badly discolored. This to appearance was a most unpromising case—at the time, the most unpromising one I had ever seen. The lady was a resolute woman, determined from principle never to wear artificial teeth, but to keep her own as long as possible. She was therefore ready to have anything done that I dared undertake. The resolution of the patient, healthy gums and naturally strong teeth, were in my favor. I commenced by plugging the fangs of the centrals at the first sitting. One inflamed and abscess formed. A less resolute woman would have given up; she poulticed her face, and in four days returned as resolute as ever.

At the next sitting I treated the laterals as I had before done the centrals. At four sittings of about two hours each, I succeeded in safely plugging the six cavities, completely restoring the shape and size of the teeth and very much improving their color. Into these six cavities I had condensed five pennyweights of gold. I had made it a condition before operating that she should stay in town after the operation until I should be satisfied that all would do well. At the end of a week there were no signs of inflammation or soreness, and I allowed her to go home. I saw her nearly a year after the operation, and she told me her teeth had not given her the slightest trouble or uneasiness; that they felt so much like her teeth of former days, that she feared she might use them too carelessly, and some day undertake to crack nuts or some other hard substance, and break them. She, too, said no money could buy the gold from these teeth unless more could be put in.

CASE IV.—The master of one of the South End Schools had a lateral incisor that had been filled more than a quarter of a century. Until within the last year it had not given him the slightest trouble, when, all at once, the filling fell out. To his astonishment, he found that decay had commenced upon the other side of the tooth, extending entirely through it until it had loosened the filling which was upon the central side. When I saw the tooth the cavity extended from side to side, one quarter of the front point next the central was gone, and all the articular surface except the enamel. The tooth looked very much as if a saw had been run across it, which was just thick enough to take all but the front enamel, but as it went up and the tooth became thicker, it left the enamel on the palatine portion. The decay extended upwards to about a level with the alveolus, but the nerve did not seem to be involved, probably the nerve was dead and the cavity filled with ossific matter. The question with the patient was, whether it was best to cut off the tooth and pivot one upon its root, or extract it and set a tooth upon a plate. The latter could be easily done, as he already wore the centrals on plate. I told him there was no need of doing either, that I could make that tooth more serviceable than any artificial tooth could be, but that it would proclaim its golden character. To him this was no objection. I filled it, and he seemed delighted with the result. If it lasts as long as the first he promises to be satisfied, and I think I shall be. He said it was worth fifty dollars to him, and he was willing to pay me that for the operation. I concluded to take a more moderate fee, telling him that at the end of the twenty-five years, if the filling was good, I would take the balance.

Dr. Rolfe also exhibited a patient in whom he had restored to its original form and dimensions about a quarter of the substance of an upper incisor tooth, extending from the gum to the extremity on its outer edge.

ON THE CINCHONA BARKS.

THE species of *Cinchona* are very unequally distributed in the forests on the eastern side of the Andes, from the extreme north of South America, in latitude 11° N., where they occur on the mountains of Santa Martha, to the forests of Bolivia, as far S. as 19° S. Speaking generally, the trees grow at an elevation of from 4000 to 8000 feet above the level of the sea.

The geological formations on which they are found are mica slate, gneiss, clay slates, and lower silurian rocks, covered, however, in most cases, by several inches of rich vegetable soil. The climate of the districts inhabited by the cinchonas is by no means an agreeable one, as witnessed by Dr. Karsten, who describes the rainy season as lasting nine months in the year, during which time "a steady rain is only interrupted during the day by short gleams of sunshine interchanging with clouds and mist, whilst in that part of the year which answers to our winter, cold nights in which the temperature of the air descends to freezing-point, are followed by days in which the rays of the sun, piercing here and there through the thick clouds, raise the temperature to 77° F., whilst the leaves are kept almost constantly bedewed by the continual mists."

The temperature of this vast region, as stated by Mr. Markham, ranges (to speak generally) from 60° to 80° F., thus corresponding pretty closely with the isotherms laid down by Dove for these regions. It is in the highest degree necessary to pay attention to these external conditions, for, to say the least, they are of equal importance with the selection of the proper species for medicinal uses. The medicinal properties of many plants vary extremely in the same species under different conditions, and even when no appreciable difference in those conditions can be traced. Identity in medicinal properties by no means corresponds with identity in structural characteristics in all cases, though it does so in many. *Digitalis* grown in the Himalayas is said to be nearly if not quite inert. On the other hand, hemp grown in this country is almost entirely devoid of the peculiar resinous principles so abundantly found in the same species growing in the hot sunny plains of India. But we need not go far in search of instances of this kind. *Ænanthe crocata* and *Cicuta virosa*, tolerably common plants in the south of England, where they have a well-established evil reputation as poisonous plants, are both harmless on the other side of the Tweed, according to Dr. Christison. We have also the testimony of Dr. Karsten upon this point, with regard to the variability in medicinal virtues of *Cinchona lancifolia* in New Granada, and that of Mr. Spruce in the case of *C. condaminca*, the qualities of whose bark vary accordingly as the tree has grown on the sides of the mountains most exposed to the rays of the evening or morning sun. Vegetable physiology is not at present competent to account for

such peculiarities in a satisfactory manner, but it is at least necessary to bear them in mind in the experiments now being carried on, as the kind of cinchona-tree that is proved to yield quinine and valuable alkaloids in Peru may by no means necessarily yield the same products when grown in other climes.

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Of the numerous species described by botanists as belonging to this genus, only a few have been proven to possess valuable properties, while others have been shown to be entirely inert. Before giving the list of valuable species, we feel constrained to say a word or two about the nomenclature, already sufficiently involved, and likely from injurious changes to become more so. First, as to the name of the genus *Chincona*, or *Cinchona*. Linnæus, erroneously, no doubt, wrote the latter, which has been up to this time universally adopted by botanists, pharmacists, and medical men. Mr. Markham's suggestion to alter established usage is therefore objectionable: the change, however, is so slight, that we apprehend no practical inconvenience will arise, which ever way the name be spelt. As to the species, the case is different: these have been named and renamed, according to the views of particular authors, till confusion has become worse confounded. Fortunately for our present purpose, only one of the medicinal species to be hereafter mentioned suffers under this horrible malady, caused by conflicting synonyms. Let us explain: in the works of Weddel, Howard, and other recent writers, the species yielding the various kinds of crown bark has been called *Cinchona condaminea*; its varieties have been named—1. *Uritusinga*, from the name of the place where it grows; 2. *Chahuarguera* (!) from two native words signifying a resemblance to garments made of the fibre of the American aloe or agave; 3. *crispa*; and 4. *lancifolia*, besides others that need no mention here.

Now Dr. Hooker points out that the original name applied by Linnæus and adopted by many other writers was *C. officinalis*, a name changed by Humboldt and Bonpland, without sufficient reason, to *C. condaminea*. Dr. Hooker very justly remarks, that "When once the law of priority is departed from without perfectly good cause, the door is opened to endless future change and consequent confusion." Hence then, in future, we are to employ Linnæus's original and unobjectionable name *C. officinalis*. The variety—1. *Uritusinga*, having been the original one detected by La Condamine, is to be called *C. officinalis*, var. *condaminea*; the variety 2. *Chahuarguera*, having been figured by Bonpland, is to be called *C. officinalis*, var. *Bonplandiana*; a change for the better so far as facility of pronunciation is concerned; vars. 3 and 4 remain as they were. We should not have trespassed so long on our readers' attention, had we not thought it more than likely that this recent

change of names, however desirable it may be, may sorely puzzle those not well versed in botanical lore. Adopting, then, the correct nomenclature, we have the following medicinal species:—

Cinchona calisaya furnishes yellow bark.

"	<i>nitida</i>	} furnish grey barks.
"	<i>micrantha</i>	
"	<i>peruviana</i>	

Cinchona officinalis.

"	var. <i>lancifolia</i>	furnishes Carthagen bark.
"	" <i>condaminea</i>	} furnish crown barks.
"	" <i>crispa</i>	
"	" <i>bonplandiana</i>	

Cinchona succirubra furnishes red bark.

Geographically speaking, the kinds may be thus grouped:—

1. The Calisaya, or yellow bark region of Bolivia and Southern Peru.
2. The grey bark region of Huanuco and Northern Peru.
3. The Carthagen bark region of New Granada.
4. The red bark region of Ecuador.
5. The crown bark region of Loxa.

Cinchona calisaya, and a small shrubby variety of it, called *C. caliasaya*, var. *josephiana*, so named in honor of Joseph de Jussieu, yield the much-valued yellow or Calisaya bark. These trees inhabit the forests of Bolivia and Carabaya in South Peru, and were originally discovered in 1785 by the German botanist Haenke, accompanied by a Spanish naval officer. "Formerly," says Dr. Weddell, "they were everywhere found around the inhabited parts of the region, while at present, to find a tolerably-sized tree, it is necessary to make several days' journey into the heart of the forests." Further north, although the soil and climate continue much the same, the valuable species disappear until in 10° S. latitude, in the forests of Huanuco (the district traversed by Ruiz and Pavon), the species yielding the Huanuco or Lima barks of commerce are met with. The epithet grey is applied to these barks, from the appearance presented by the lichens growing on them; when wetted, they have an opalescent appearance. They are esteemed in commerce as yielding cinchonine.

Again, going northwards, is an interspace inhabited by many inert *Cinchonæ*, and beyond this district are the forests of Loxa, in Ecuador, yielding the various kinds of crown bark, the produce of *C. officinalis* and its varieties. These barks are rich in cinchonidin, and hence the cure of the Countess de Chincon must be attributed to that substance. For upwards of a century these were the only barks known. Carthagen bark is yielded by another variety, *C. officinalis*, var. *lancifolia*, and also furnishes a large amount of quinin. The tree is a native of the forests of New Granada, where it was originally discovered by Mutis.

On the eastern side of Chimborazo in Ecuador, are situated the forests supplying the red bark, cascarilla roja, the produce of *Cinchona succirubra*, and now considered as valuable, or more so, than the yellow bark. To Pavon, Dr. Klotsch, and especially to Mr. Spruce, a botanical traveller, we are especially indebted for our knowledge of this important species. It is described as being the most handsome tree of the forests in which it is found, and seems to require a higher temperature than that which is congenial to the other kinds.

The method of collecting the red bark, as described by Mr. Cross, seems to be nearly the same as that noticed by Dr. Weddell, in the case of the Bolivian barks. The red bark is exported from Guayaquil, and contains from three to four per cent. of alkaloids. Its introduction into England resulted from the capture of a Spanish ship with a cargo of this bark by an English frigate in 1779, and Dr. Saunders, of Guy's Hospital, was the first to ascertain its value. Unmerited discredit afterwards attached to it, from the use of fictitious kinds in place of the true red bark. North of Chimborazo, in the elevated plains of Riobamba and Quito, the *Cinchona* disappear, but in the mountain ranges further to the north, from about lat. 2° N. to the Santa Martha mountains in 11° N. they are again met with.

There are thus many spots in the regions alluded to, as well as in Mexico, &c., where the conditions seem favorable for the growth of cinchonas, but where, nevertheless, they are not to be found, owing, as Mr. Markham suggests, to breaks in the chain of mountains, and the occurrence of low lands in the intervals.

The utter disregard which the Spanish and South American Governments have shown in past years to the maintenance of the cinchona forests, and the reckless destruction of these valuable trees, which they took no steps to prevent, have caused a well-grounded apprehension lest the supply of quinine may shortly fail. Representations to this effect were made by M. D. Jussieu and others more than a century since, but still the same recklessness prevailed, accompanied by carelessness in the due selection of the proper kind of bark, and by obstructive and vexatious fiscal regulations. The recent testimony of Dr. Weddell as to the course pursued in Bolivia, and that in Peru by Mr. Markham, as well as in Ecuador by Mr. Spruce, is all to the same effect. It is a fact by no means devoid of significance in this particular, that in the recent International Exhibition, not one of the South American Governments contributed specimens of the barks grown within their territories—a void in part supplied by Mr. Howard, who exhibited living plants of some of the most valuable kinds, as well as a fine collection of commercial specimens. Our Dutch neighbors also sent illustrations of the success of the experimental culture of cinchona barks, now being carried on by them in Java. No wonder, then, that attempts have been made at various times to transplant the cinchona plants to other regions. The truth of Mr. Spruce's proposition, that

"whatever vegetable substance is needful to man, he must ultimately cultivate the plant producing it," will not be disputed. The earliest attempt to export living cinchona plants was that of La Condamine, who in 1745 tried to convey some young plants down the Amazon to Cayenne, from whence he intended to convey them to Paris—a plan that was frustrated by a wave, which dashing over his vessel, swept off the box containing the plants. * * * *

Mr. Howard forcibly urges upon the profession the desirability of employing the salts of cinchonine as a substitute for quinine, as the same amount of febrifugal power may be obtained from the former as from the latter, and at one-fourth of the cost. It is assuredly of great importance that the accuracy of this statement be tested in practice.—*British and Foreign Medico-Chirurgical Review*.

NOTE ON POISONING BY RHUS TOXICODENDRON.

THERE are but few of our indigenous plants more widely disseminated in the neighborhood of Philadelphia than the species of *Rhus* commonly known as poison vine. The singular fact that many persons are wholly unsusceptible to its influence is quite true, whilst that others are obnoxious to its effects in various degrees, from a temporary irritation to the most virulent inflammation and eruption, is equally true. Being one of the latter class, we have often suffered the inconvenience arising from it, and used most of the remedies recommended in the books, and by non-professional experience. When the alkaline solutions, as ammonia, liquor potassæ or even pearlash are applied, immediately after exposure to the *virus*, they rarely fail to counteract its effects except in the most susceptible, but unfortunately it often happens that the victim does not suspect the nature of the irritation until it proceeds to the vesicular condition, when, as is well known, the little blisters extend slowly to the surrounding parts, appearing as pimples colorless at first, often attended with an annoying itching sensation. In a recent attack, where the extension of the poison over the surface had been controlled by diluted liquor potassæ (1 to 2 of water) it occurred to us to try the coagulating influence of Monsel's Solution (Liq. Ferri Subsulphatis, Pharm. 1860), and with entire success and relief. Each vesicle was punctured with the point of a penknife, and a little splinter of wood dipped first in the solution and then inserted in the vesicle. The sensation is a little smarting, but not severe, and the peculiar action of the poison is at once arrested at the base of each vesicle, which soon dries up and the irritation ceases. The scab which forms under the influence of the subsulphate, is more consistent as well as persistent, than when it is not employed, and it has a dark-red color, which gives to the part a speckled appearance. The relief thus afforded when the poison is on the wrist, or

on the hands where the cuticle is thick and the vesicle deep-seated, is very gratifying.—*Am. Jour. of Pharmacy.*

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BOSTON: THURSDAY, DECEMBER 31, 1863.

THE SANITARY COMMISSION.—This angel of mercy, which follows in close companionship upon the horror and havoc inseparable from the terrible war which still devastates our land, is just now paramount to the excitement of the war itself in the place which it holds in the public mind. The impediments to the movements of hostile armies which the forces of nature present at this inclement season have caused a temporary suspense of active hostilities, while the whole country, away from the winter camps of our brave soldiers, is busily engaged in the endeavor to provide for their future wants in every way that patriotism and benevolence can suggest. There seems to be no limit to the bounty which the bare mention of this noble organization everywhere unseals as if by a magic touch. East and West, North and South, as far as the control of our arms extends, all hearts and hands unite in urging forward the blessed work which it is its mission to perform. It is binding all classes together as they have never been united before; breaking down all conventional barriers of society, and blessing its coadjutors at home equally with its beneficiaries in the hospital or on the field of battle. Its practical workings have been everywhere marked by rare good sense and efficiency, adapting it to every emergency, and daily enlarging its power and increasing its scope. When its operations first commenced it met a pressing want by the publication of a number of excellent papers on important points of military hygiene, or the management and treatment of those diseases to which our armies were specially exposed. Its strength has grown with its age, until its helping influence is felt by every soldier in the land.

At the present time the Sanitary Commission has two principal organs by which it makes known to the public at large its regular operations: the *Sanitary Reporter*, published semi-monthly at Louisville, Ky., under the editorship of the distinguished geologist, Dr. J. S. Newberry; and the *Sanitary Commission Bulletin*, published also semi-monthly, at New York. In the interesting pages of these two publications we find full reports of the operations of the various agents of the association in all parts of the country; important information of the bureau work at Washington; detailed accounts of the different "Soldiers' Homes" which it has established in various central localities, together with much miscellaneous information upon matters pertaining to the health and comfort of our armies. They also publish explicit information concerning pensions, furloughs, the method of securing back pay, &c.; in short, anything and everything which can in any way lighten the burdens or relieve the sufferings of our patriot soldiers furnishes a topic for their pages. Running over their interesting contents, we often come upon touching pictures of heroic self-devotion, which show how truly noble is the spirit, which deep down

in the hearts of the brave men in the ranks sustains them through all their sufferings and trials. The following extract, which we take from the *Bulletin* of December 15th, shows so well the practical operations of the Commission, and is so full of pathos, that we cannot refrain from copying it entire. The writer is speaking of one of the Nashville Hospitals.

"Away up in the fourth story of Hospital No. 3, and in a far corner of the ward, he noticed one day an old lady sitting by the side of a mere lad, who was reduced to the verge of death by chronic diarrhœa. She was a plain, honest-hearted farmer's wife, her face all aglow with motherly love, and who, to judge from appearances, had likely never before travelled beyond the limits of her neighborhood, but now had come many a long mile to do what might be done for her boy. In the course of a conversation she informed Mr. Ingraham that if she 'only could get something that tasted like home—some good tea, for instance, which she could make herself, and which would be better than that of the hospital, she thought it might save her son's life.' Of course it was sent to her, and on a subsequent visit she expressed her hearty thanks, in a simple, hearty way, quite in keeping with her whole appearance. Still she seemed sad; something was on her mind that evidently troubled her, and, like Banquo's ghost, 'would not down.' At length it came out, in a confiding, innocent way—more, evidently, because it was uppermost in her thoughts than for the purpose of receiving sympathy—that her means were about exhausted. 'I didn't think it would take so much money; it is so much further away from home than I had thought, and board here is so very high, that I have hardly enough left to take me back; and by another week I will have to leave him. I have been around to the stores to buy some little things that he would eat—for he can't eat this strong food—but the prices are so high that I can't buy them, and I am afraid that if I go away, and if he doesn't get something different to eat, that, maybe—' and the tears trickled down her cheeks, 'he won't—be so well.'

"Mr. Ingraham, who is an Episcopal minister of the warmest-hearted kind, thought that difficulty might be overcome; and if she would put on her bonnet they would go to a store where articles were cheap. Accordingly, they arrived in front of the large three-story building which government has assigned to the Commission, and the old lady was soon running her eyes over the long rows of boxes, bales and barrels that stretched for a hundred feet down the room, but was most fascinated by the bottles and cans on the shelves. He ordered a supply of sugar, tea, soft crackers and canned fruit; then chicken and oysters; then jelly and wine, brandy, milk, and under-clothing—until the basket was full. As the earlier articles nestled under its lids, her face was glowing with satisfaction; but as the later lots arrived, she would draw him aside to whisper that it was too much; 'really she hadn't enough money;' and when the more expensive items came from the shelves, the shadow of earnestness which gloomed her countenance grew into one of perplexity, her soul vibrating between motherly yearning for the lad on his bed, and the scant purse in her pocket, until, slowly and with great reluctance, she began to return the costliest.

"'Hadn't you better ask the price?' said her guide. 'How much is it?' 'Nothing,' replied the storekeeper. 'Sir?' queried she, in the utmost amazement, 'nothing for all this?'

"'My good woman,' asked the guide, 'have you a Soldiers' Aid Society in your neighborhood?' Yes, they had; she belonged to it herself. 'Well, what do you suppose becomes of the garments you make, and the fruits you put up?' She hadn't thought; she supposed they went to the army; but was evidently bothered to know what connection there could be between their aid society and that basket. 'These garments that you see came from your society, or other societies just like yours; so did these boxes and barrels; that milk came from New York; those fruits from Boston; that wine was likely bought with gold from California; and it is all for sick soldiers, your son as much as for any one else. This is the U. S. Sanitary Commission store-house; you must come here whenever you wish, and call for everything you want; and you must stay with your son until

he is able to go home ; never mind the money's giving out ; you shall have more, which, when you get back, you can refund for the use of other mothers and other sons ; when you are ready to go I will put him in a berth where he can lie down, and you shall save his life yet !'

"She did—God bless her innocent, motherly heart—when nothing but motherly care could have achieved it ; and, when last seen, on a dismal, drizzly morning, was, with her face beaming out the radiance of hope, making a cup of tea on the stove of a caboose car for the convalescent, who was snugly tucked away in the caboose berth, waiting the final whistle of the locomotive that would speed them both homeward."

There are, nevertheless, persons in the community who are either wilfully blind to or strangely ignorant of the immense benefits flowing out from this magnificent charity. One of our professional cotemporaries has even had the bad taste—to use the mildest term—to speak of it as if it were little better than a political engine, and one, too, that ought to be closely restrained in its power. To such perverseness we have no patience to reply. As an illustration of the surprising ignorance which may even yet exist in some quarters about its operations, we quote the following from the *Bulletin* :—

"AN OFFICER'S OPINION, AND WHAT BECAME OF IT.—'The Sanitary Commission is a humbug. It has done no good, and never will.' This was the remark of an officer lately who had been in this hospital for some time sick ; and perhaps I can serve the cause of humanity and the country in no better way than by repeating the conversation which then took place, and give the results :—' You think so, do you ? What was the matter with you when you came here ?' 'Diarrhoea and scurvy.' 'What was the first thing done for you when you came here ?' 'I had a warm bath and clean clothes ; but what has that to do with the Sanitary Commission ?' 'Never mind, we will see. Are you better than when you came in ?' 'Yes, nearly well.' 'What has cured you ?' 'The vegetables, I believe.' 'Do you know where the vegetables came from ?' 'No.' 'You were in the Commissary-room to-day, and admired the stock of vegetables, pickles, cabbages, cans of fruit, bottles of wine, and cordials, did you not ?' 'Yes, but why ?' 'No matter why. I want you to look at the shirt and drawers you have on, then go through the hospital and see one hundred and twenty-two men with clean shirts, drawers, sheets and pillow-cases ; then go into the linen-room and I will show you enough more to change every man and every bed, and the whole of it came from the Sanitary Commission. All the pickled cabbage you and the rest have eaten has come from them, and they are ready to furnish as much more if I need it ; and yet you say, without knowing what you talk about, that the Sanitary Commission is a humbug ! If it had not been for this Commission, you and the rest of those in this hospital from the Army of the Potomac, who have been suffering from scurvy, would be as badly off as you were when you came in. You have abused an association which has put comfortable clothes upon you, has provided the vegetables you needed to cure you, and has done the same for thousands besides you.' 'Doctor, I never knew these things before. I have heard that all they did was for the benefit of the surgeons about the hospitals ; but, to tell you the truth, I never inquired. There is an Aid Society in our place, and I have discouraged my sisters from having anything to do with it ; but no such word shall come from me again.'

"He was cured of his folly, humbled and shamed, for it was at the dinner-table that the conversation took place, and I was glad that others were present. This is not a solitary instance. I have had to contend with just such *perverse ignorance* for the past two years; but this was so striking a case that I thought it might do good to furnish it for publication in the *Reporter*. The Commission has aided and blessed me in my work ever since November, 1861; and I say again, as I have said before, 'that no instrumentality within my knowledge has done so much real good for the service as the United States Sanitary Commission.

BENJ. WOODWARD,
Surgeon 22d Ill. Vols., in charge.

U. S. Gen. Hospital, Tullahoma, Tenn., Nov. 17th, 1863."

LOOK ON THIS PICTURE.—(Diet of Federal prisoners at Richmond, as reported by General Neal Dow.)

"We have only corn bread (*unsifted*), a little rice, and a few poor sweet potatoes and water for our rations. The bread is about half a pound; the rice half a gill. I had to-day eight potatoes; only two were good for anything—medium size—the others not larger than one's finger!!"

And on this.—(Diet of rebel prisoners at Point Lookout, Md.)

FULL DIET.

Dinner.

Beef or pork, 4 oz.
Potatoes, 4 oz.
Hard-tack, 3 oz.

Breakfast and Tea.

Coffee or tea, 1 pt.
Rice, 2 gills.
Molasses, 1 oz.
Hard-tack, 3 oz.

HALF DIET.

Dinner.

Meat, 2 oz.
Potatoes, 3 oz.
Hard-tack, 2 oz.

Breakfast and Tea.

Coffee or tea, 1 pt.
Rice, 1 gill.
Molasses, $\frac{1}{2}$ oz.
Hard-tack, 2 oz.

LOW DIET.

Dinner.

No meat.
Potatoes, 2 oz.
Hard-tack, 1 oz.

Breakfast and Tea.

Coffee or tea, 1 pt.
Rice, 1 gill.
Molasses, $\frac{1}{2}$ oz.
Hard-tack, 1 oz.

Soup and soft bread are also given them at least once a week.

We commend these pictures to our professional brethren on the other side of the water who are so much shocked at "Federal Foul Blows."

BILL FOR AN AMBULANCE SYSTEM.—We are pleased to see that Senator Wilson has introduced a bill in the United States Senate for a complete system of ambulances for the whole army. So far as its provisions have appeared in the newspapers they are identical with those of General Meade's order, an abstract of which we printed a short time since. As the Senator from Massachusetts has been usually regarded as the most strenuous opponent of such an organization, we suppose the withdrawal of his opposition is tantamount to the success of the measure. This certainly is a matter for great public congratulation. Who shall deny hereafter the force of public opinion?

THE operation for ligature of the subclavian artery, performed in November by Dr. Armsby, of Albany, has been successful. The ligature came away on the twenty-ninth day. It is now (Dec. 28th) forty days since the operation, and the patient is able to attend to business.

DUTCH TRANSLATION OF PROFESSOR GROSS'S SURGERY.—We have had an opportunity of examining the first volume of Dr. J. D. Sachse's

translation of Prof. Gross's Surgery, published at Nieuwediep the present year. This volume constitutes one-fourth of the whole work, so that the Dutch translation will form four volumes. The part we have seen is very elegantly gotten up, and the publisher writes that it has been received with great favor by the profession of Holland. Prof. Gross has reason to be gratified at the superior style in which his work is offered to his brethren abroad, and also with the flattering reception it has met with.—*Med. News and Library*.

A NEW HOSPITAL IN NEW YORK.—The late James H. Roosevelt has devised his entire estate, nearly half a million of dollars, "for the establishment, in the city of New York, of a hospital for the reception and relief of sick and diseased persons, and for its permanent endowment."—*Med. Reporter*.

THE ACTION OF OXYGEN ON WINE.—At the last meeting of the Academy of Sciences, M. Berthelot showed that ten cubic centimetres of oxygen are sufficient to destroy the bouquet of a litre of wine in a few minutes. Hence the importance of corking bottles carefully. Yet a small quantity of oxygen in a diluted state, as in atmospheric air, does not seem to spoil the bouquet, owing to the presence of carbonic acid in wine. The cause of the loss of bouquet in wine after long keeping appears to be the gradual absorption of oxygen, which affects it as would the addition of a mineral water, such as that of Vichy.—*London Lancet*.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 26th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	52	59	111
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.8	36.5	78.3
Average corrected to increased population	00	00	85.69
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infan.
24	6	9	10	0	1	2	0

MARRIED,—In Christ Church, Stratford, Conn., Dr. William Henry Carmalt, of New York city, to Miss Laura Woolsey Johnson, of Stratford.

DIED,—At Kalamazoo, Mich., Charles P. Marsh, M.D., 35.—In Johnstown, Fulton Co., N. Y., 9th inst., Samuel Maxwell, M.D., aged 80.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 26th, 111. Males, 52—Females, 59.—Accident, 3—aneurism (of the aorta), 1—congestion of the brain, 1—disease of the brain, 1—bronchitis, 4—burns, 3—cancer (of the uterus), 2—consumption, 24—croup, 6—diarrhœa, 1—diphtheria, 2—dropsy, 4—dropsy of the brain, 3—dysentery, 1—scarlet fever, 9—typhoid fever, 2—disease of the heart, 1—hernia, 1—infantile disease, 4—intemperance, 1—jaundice, 1—disease of the kidneys, 1—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 10—marasmus, 3—old age, 4—paralysis, 1—premature birth, 2—puerperal disease, 1—scalded, 1—softening of stomach, 1—tumor, 1—ulcers (in stomach), 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 41—between 5 and 20 years, 14—between 20 and 40 years, 22—between 40 and 60 years, 24—above 60 years, 10. Born in the United States, 66—Ireland, 39—other places, 6.

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No. 23.

EIGHTEEN DAYS OF VISION AFTER ENTIRE LOSS OF THE CORNEA.

[Read before the Suffolk District Medical Society November 28th, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY JOHN H. DIX, M.D., BOSTON.

MR. S. F. E., on the 31st of October last, three weeks ago, was attacked with inflammation of the left eye. On the following day, he was seen by his physician, Dr. John C. Page, of Centre Harbor, N. H., who, in a letter to me, describes Mr. E.'s condition as follows:—"I found his eye firmly closed and highly inflamed, and the integuments, in fact the whole side of the face, much swollen, and a large quantity of cream-colored matter issuing from between the lids." Antiphlogistic treatment, local and general, was judiciously adopted by Dr. Page, and thirteen days ago, the inflammation having subsided, the patient found, on raising the lid with his fingers, that he could see, though imperfectly. He believes that vision has been gradually improving ever since.

The condition of the eye is now as follows. The lids somewhat thickened, but not enough to prevent his opening them sufficiently to see. The conjunctiva, so much of it as remains, is moderately injected, as on the subsidence of an acute inflammation. The cornea is absolutely and entirely wanting, unless some portions of it remain in a granulating surface, forming a sort of rim correspondent with the former periphery of the cornea, and of which it is impossible to say whether it is composed of the iris, or the debris of the cornea, or both. There is, of course, no anterior or posterior chamber, but their places are occupied by the crystalline lens, protruding through and supported by the rim above spoken of, as well as by the lateral attachments of the lens. Through the lens, the anterior capsule of which is perfectly clear, he has very tolerable myopic vision, enabling him to read the test type No. 2 of Jaeger, about three inches off. The gradual improvement of vision was probably attributable mostly to the subsidence of the inflammation, in the early period of which the incessant flow of mucus intercepted the light.

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The very remarkable feature of the case is, that in this exposed position, open to the air, the crystalline system, the lens and capsule, has remained perfectly normal and fulfilling the double function of cornea and lens.

With a double concave lens he is enabled to see the same type further off and to discern larger objects; and the condition of his present vision, although it does not conclusively prove, certainly tends strongly to corroborate the idea that the adjustment or accommodation of vision to different objects and distances is effected, in part at least, by change in the position of the crystalline lens, its approximation to or projection from the retina.

This supposition is favored by two circumstances. One is the very extreme myopy caused by this misplacement of the lens, notwithstanding the entire absence of one of the refracting media, the cornea, and the total loss, by reason of mechanical pressure upon the iris, of any effect upon the accommodation of vision which results from the action of the iris,* either in the retraction of its peripheral fibres, the projection of its pupillary margin, or contraction of the pupil itself.

Another and a more significant circumstance attending this case is, that for a period of eighteen days, though projected from its usual position by fully the depth of both the anterior and posterior chambers, the crystalline system, lens, capsule and attachments, remained in perfectly healthy condition, the transparency of neither lens nor capsule being in the least degree impaired. This does not prove that change in the position of the lens is chiefly or at all concerned in the accommodation of vision, but it does show that movement of the lens may take place within a range more than sufficient to accomplish all actual changes of accommodation without disturbing the attachments of the lens through the suspensory ligament or zonula and ciliary processes.

By general consent modern pathologists regard the observations of Helmholtz and Cramer as proving conclusively that the accommodation of vision depends upon a change in the form of the crystalline lens, and not in its position. Not questioning the reliability of such observers, it is to be remembered that the absolute accuracy of minute observations by the ophthalmometer depends upon a condition very difficult of attainment, absolute immobility of the globe itself, with which the mere act of respiration and possibly, also, involuntary action of the external muscles of the globe, may interfere. In regard to this question of the accommodation of vision, it is worth while also to consider that for the compression of a body as dense as the crystalline lens to such a degree as sensibly to change its

* A case of complete dialysis, or separation of the iris, with little or no loss of accommodative power, reported by Dr. Von Graefe in the *Archiv für Ophthalmologie*, proves that the iris contributes not much to the effort for accommodation. Nevertheless, an action of the iris, which in normal eyes always accompanies accommodation to near objects, must be conceded to have some bearing upon this process.

conformation, a much greater force is required than would be needed to change the position of the lens cushioned upon the comparatively soft texture of the vitreous, and resisted in a forward movement only by the aqueous humor.

If observations hereafter confirm the present theory of accommodation, it cannot be invalidated by this case, and I record the case more for the sake of its extraordinary and, in my own experience, unprecedented conditions, than for the possibility that it may aid some future observer in establishing another and more satisfactory theory of accommodation of vision.

In the hurried visit of the patient to me I was not at leisure to make so varied experiments on his vision as were desirable. Five days later, on going to Centre Harbor for the express purpose, I found, to my great disappointment, that the lens had been ejected a few hours before my arrival, vision remaining up to the time of the exit of the lens as it had been for eighteen days.

MECHANICAL ULCER OF STUMP.

[Read before the Suffolk District Medical Society, November 28th, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY JOHN GREEN, FELLOW OF THE MASS. MEDICAL SOCIETY, ONE OF THE ATTENDING PHYSICIANS AT THE CENTRAL OFFICE OF THE BOSTON DISPENSARY.

I HAVE ventured to propose the name which heads this paper for the chronic ulceration so often observed, in badly managed stumps, over the exposed end of the bone. The study of several of these cases has led me to the conclusion that the chief obstacle to cicatrization is the tension of the soft parts acting mechanically by resisting the extension of the integument over the end of the bone, and thus admitting of only a very slow and imperfect mode of repair by granulation. It is rare to see this ulcer larger than the area of the cross section of the bone, for the vital contraction which takes place in the development of granulations is almost always sufficient to draw the cut edges of the skin close up to the margin of the bone, leaving it alone to heal, if at all, by less perfect methods. Mechanical ulcer, therefore, is one of the common attendants upon that form of failure known as conical or sugar-loaf stump, and is dependent upon the same cause, viz., the excessive length of the bone as compared with the soft parts left to cover it. Defective methods of operating and of dressing have much to do with causing this accident, as I have already explained in a former paper read before this Society ("On Amputation of the Thigh," see Boston Medical and Surgical Journal for June 11 and 18, and July 9 and 16). I propose now to consider the treatment of this accident, including, as it does, a few thoughts upon the improvement of bad stumps.

In some instances it may be necessary to shorten the bone by removing a section with the saw. This I have not hesitated to do in cases where there was decided projection of the bone denuded of soft tissues, thus saving a very tedious exfoliation extending over a period of several months. The other and chief indication is the complete relaxation of the skin at the end of the stump, so that as cicatrization advances the margins of the integument may be drawn inward towards the centre of the bone. This indication is fully met in the thigh and arm, and to a less degree in the forearm and leg, by the application of a roller compressing the muscles of the stump as high as the next articulation. The tension is thus immediately relieved and the soft parts are forced down so as to form a ring-shaped cushion projecting beyond the end of the bone, which now lies safe at the bottom of a little cavity in the end of the stump, instead of forming the prominent apex of the cone. To secure the full benefit of the roller, it should be firmly and evenly applied from above downwards, so as to compress the muscles of the stump throughout their entire length. In short stumps of the thigh it is generally necessary to take a few turns around the pelvis, approaching the thigh in the manner of the "spica," and in all cases the roller should stop an inch or two above the end of the stump, to keep the lower turns from slipping off. Flannel is perhaps the best material for the roller, as from its elasticity it can be more smoothly applied, and can be worn with greater comfort than linen or cotton.

The following case, which is one of a very considerable number which I have treated by the same method, will serve to illustrate my views upon the nature and treatment of this disease.

J. M., of the 4th Infantry, was wounded in action Dec. 14th, 1862. The thigh was amputated the same day, three inches above the knee. He remained under treatment in hospital for six months, suffering from several attacks of gangrene, erysipelas, &c., and was discharged July 1st, 1863, with a conical stump. In August, he had a fall, striking the end of the stump upon the ground, and exciting destructive action in the imperfectly developed tissues which covered the end of the bone. Oct. 17th, he came under my care. At that time the bone projected beyond the soft parts and was covered only by a thin layer of granulations which showed no tendency to farther development. The skin around the bone was quite tense, and the whole end of the stump was tender and painful. I immediately applied a roller, taking a few turns around the pelvis, and rolling the stump from above downwards to within a couple of inches of the end. The effect of this application of the roller was to push down the skin and muscles, thus rendering them perfectly lax and causing the soft parts to project as a ring-shaped cushion around and beyond the end of the bone. The granulating bone, which now lay at the bottom of a little cavity in the soft

parts, was covered with dry lint, and the dressing was completed by covering the end of the stump with a square piece of cloth confined by a few turns of a roller. The excessive tenderness of the ulcer was immediately relieved, but returned whenever the roller became loose, to be again relieved by its re-adjustment. In two or three days a marked improvement took place in the aspect of the ulcer, which had already begun to cicatrize, and in the course of a fortnight it was reduced to a third of its former area. At the end of a month (Nov. 16th), the ulcer is not larger than a silver three-cent piece, and is rapidly cicatrizing.* The soft parts project three quarters of an inch (by actual measurement) beyond the end of the bone, forming a thick ring-shaped cushion. At the time of dressing, or whenever the roller becomes loose, the end of the stump becomes nearly flat, but without prominence of the bone. The soft parts have become much more lax under the use of the roller, and the effect of the circular compression becomes every day more and more evident. I have directed the patient to continue the use of the roller until the processes of repair are wholly completed and the soft parts become thoroughly consolidated in their present position.

[An old method of relaxing the soft parts by means of several strips of adhesive plaster applied lengthwise to the sides of the stump and attached to a brick or other weight hung over the foot of the bed, has been very ingeniously modified by Mr. B. F. D. Adams, surgical house-pupil at the Mass. Gen. Hospital, and is now frequently employed in the surgical wards of that institution. This plan succeeds very well during the few weeks immediately following the amputation, and while the patient is still confined to his bed, but it can hardly be applied to the treatment of mechanical ulcer, continuing, as it does, for many months beyond the period over which the surgical treatment of a stump usually extends. In this very method, moreover, a roller is applied over the strips of plaster to keep them from slipping, and the result is no better than that which follows the use of the roller alone.]

909 Washington Street, Boston, Nov. 28th, 1863.

REMARKABLE CASE OF FECUNDITY.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Some days since the Editor of the *Democrat*, at La Crescent (on the west side of the river from this city), handed me your letter asking for the name of the physician, and items concerning a remarkable case of fecundity, as reported in the press of this section, in the case of Mrs. G. H., a German lady. The letter has been awaiting reply until now, and incessant business is the only excuse I can offer. The case was one of such remarkable cha-

* Dec. 1st, 1863.—The ulcer is completely healed.

racter that it has been attracting much attention in the west and southwestern cities. Briefly, I will give you from my case-book such facts as will be of interest.

CASE.—Mrs. G. H., aged 23 years; temperament, nervous sanguine; stature, four feet ten inches; weight, in usual health, one hundred and twenty pounds; muscular system well developed; form good; eyes light blue; hair auburn.

History.—Has never been sick since her first menstruation, which occurred when she was in her thirteenth year, on which occasion she was sick nearly two weeks. Since that time she has enjoyed almost uninterrupted good health, except when pregnant. She was married, if I am informed correctly, in November, 1860, and became pregnant in December of the same year. I was called to accouche her in August, 1861, in her first confinement. The labor was natural, the vertex of each child presenting. Pains regular. She was delivered, in twenty hours, of two living and one dead male children. Her convalescence was rapid. Dismissed the case Sept. 5th.

I did not see her again until June, 1862, when I was sent for to accouche, and delivered her of three males (two living) and one female, living. The first (a female) presented the breech; second, left shoulder; third and fourth, vertex. Convalescence tedious and protracted, with delirium. Dismissed the case July 17th. After that time I did not see her till called again, August 5th, 1863. Was called at half past 3, A.M.; arrived at the house at 6, A.M. On examination, found the membranes ruptured and the left foot presenting. Delivered her of a healthy male child at 8, A.M., and delivered her in fifty-three minutes of two living female children, both presenting the vertex. Convalescence complete on the seventeenth day.

She is now in good health, and when I saw her on the 3d inst., she informed me that she was again pregnant. Such is the history of this remarkable instance, as taken from my case-book. Want of time prevents my giving the details and all the minutiae of the case, which is looked upon in the West as very remarkable.

Mrs. H. is a very pretty looking woman, good complexion, inclined to sociability, but more given to housework than parlor accomplishments. Her husband was drafted, but the citizens kindly raised three hundred dollars for his exemption, and he remains at home, being now in the employ of Rev. B. Mills, on a farm.

Very truly yours, &c.,

La Crosse, Wis., Dec. 11, 1863.

M. M. POMEROY, M.D.

THE class attending the Winter Session of Lectures at the Massachusetts Medical College, in Boston, numbers 213—being the largest medical class ever assembled in this city.

ON OZÆNA AND ITS TREATMENT.

BY PROFESSOR TROUSSEAU.

THE horrible fœtor of the breath which constitutes ozœna is an infirmity so odious and unfortunately so common, that the physician ought, from the very commencement of his career, to make himself acquainted with the causes and treatment of this condition. In the first place, we must be careful not to confound ozœna depending upon the condition of the nasal fossæ with the fœtor of the breath caused by some affection of the mouth or throat. It is not, however, always easy to avoid error. The simplest diagnostic means is to direct the patient to close his mouth and nose alternately during expiration; it is then generally easy to determine the source of the fœtor. This method may, however, prove insufficient, because the vitiated secretions of the nasal fossæ may fall back into the pharynx and communicate their disagreeable odor to the air which passes through that cavity. The physician, however, who has seen a few cases of the kind, will have no difficulty in recognizing the condition in question, for the odor is quite peculiar, so much so, as scarcely to admit the possibility of mistake. This specific odor is, however, chiefly associated with that form of ozœna which is called *constitutional*, and which is specially associated with the scrofulous or herpetic diathesis.

All the secretions which are in contact with the air become altered in their composition if they are not renewed, and this alteration is more considerable in some persons in virtue of conditions which it is not easy to indicate, but which depend as much perhaps on the quality of the secretion at the moment it is formed, as on the special nature of the secreting organ. The nasal secretions in some persons alter with great rapidity, and contract an extreme fœtor which will not be observed in other persons, though much less particular as to the details of the toilet. Ozœna sometimes depends upon this cause; when the nostrils have been cleared of their secretions, the breath is pure; a few hours later it becomes foul if the matters are allowed to accumulate in the nasal fossæ. The remedy for this condition is not far to seek; it consists in using the pocket-handkerchief frequently, and cleansing the nose thoroughly.

In some persons the secretions of the mucous membranes in the normal condition have, like that of the skin, a remarkable fœtor; if these parts are attacked with inflammation, acute or chronic, the fœtor becomes much exaggerated; you may be often struck, for example, with the foul odor of a gonorrhœal discharge. This fœtor persists as long as the inflammation is acute, and, indeed, sometimes persists after it has become chronic. Thus, in some persons, as soon as they contract a coryza, the secretions from the nostrils become of very offensive odor.

The ozœna called *constitutional* is rarely observed during infancy,

even although there should exist at birth some of the anatomical conditions which lead almost certainly to it. It is rare that the condition is established before the fourth or fifth year; it increases towards puberty, continues during adult life, and diminishes but does not disappear completely in old age. This form is distinguished by a fœtor peculiar to itself; the nasal secretions are usually purulent, sometimes they dry up and form crusts which mould themselves to the interior of the nostrils, and there is usually a little bleeding when they are discharged. The purulent discharge is often very abundant, though it is right to mention that it is not in these cases that the odor is most disagreeable unless the ozæna be connected with a disease of the antrum, in which the matter remains, and which is discharged in streams on certain movements of the patient. Almost always on examining the nasal fossæ by means of a small speculum, the mucous membrane will be found reddened. Ozæna has sometimes been ascribed to contraction of the nostrils due to depression of the root of the nose, but there are many persons in whom the nostrils are extremely narrow, and yet in whom the nasal secretions have never a disagreeable odor.

In other cases, rarer, no doubt, the nasal secretions appear quite the same as in other people, and at the same time there is no indication of any inflammatory affection, acute or chronic. Under such circumstances, where there is no inflammation of the pituitary membrane, no necrosis of the bones of the nose; where the individual appears to be in perfect health, where the nasal secretions have a peculiar fœtor, just as the perspiration from the feet has in some people, we are forced to admit the existence of a *constitutional ozæna*. Next to this form we must range that which depends upon a herpetic diathesis, and which is generally associated with scrofulous ophthalmia, and swelling of the upper lip. Not that every eczematous affection of the nostrils will occasion ozæna, but just as in some persons eczema of the feet, vulva, &c., produces secretions of a revolting odor, so in some individuals affected with eczema of the mucous membrane there is a discharge of a most fœtid character.

Of all the causes of ozæna the most frequent is certainly syphilis. In constitutional syphilis coryza is very frequent; although in the great majority of persons it does not give rise to fœtor of breath, it may do so, just as eczema and scrofula in certain persons. Syphilitic ozæna is also important in this respect, that more than any other form it leads to ulcerations and necrosis. Necrosis, whether due to syphilis, to gun-shot wounds, or to fractures, may lead to ozæna. The last condition to be mentioned is disease of the antrum. This account of the causes of ozæna is no doubt very imperfect; it was, however, necessary to premise it before passing to a consideration of the therapeutic means, by the aid of which we sometimes cure and often palliate this cruel infirmity.

In the first place, it must be understood that we can do but little

in the case of ozæna which depends upon necrosis of the bones. The dead bone will come away in whole or in part, and the odor will continue as long as any portion of the dead bone remains. It is sufficient to cast a glance at the bones of the head to see how difficult the expulsion of certain portions must be. An ulceration, a necrosis of the walls of the antrum, or a chronic inflammation of the mucous membrane which lines it, will also produce an ozæna, for the cure of which we can do little, and in the greatest number of such cases surgery alone can intervene by penetrating the antrum from the upper row of teeth. In all cases where we can attack the cause of the inflammation of the pituitary membrane, and where there are as yet no osseous lesions, the cure is easy; thus in syphilitic coryza without ulceration, mercurials, or iodide of potassium, will soon remove this condition. But where we have to do with a herpetic ozæna we have no longer any specific remedies, and the condition is often incurable. By means of arsenical or sulphurous preparations, or iodine, we may do some little good, but it is to topical remedies we must chiefly trust. It is still more difficult to contend against the strumous diathesis, and though we may produce some modification of the constitution, by placing the patient in favorable hygienic conditions, and administering some of the ordinary remedies, we must reckon almost exclusively upon those agents which address themselves directly to the affected mucous membrane.

Powders inhaled the same way as snuff, the direct application of caustic to ulcerated points, injections of different kinds, are the means which have proved most effectual. Not that a cure is easy, far from it, or that it can be obtained in a short time; but, however imperfect the method, we arrive occasionally at relatively good results, which we are glad to have obtained. The following are the powders I generally employ:—

1. Subnitrate of bismuth; Venetian talc, of each half an ounce.
2. Chlorate of potash, 30 grains; powdered sugar, half an ounce.
3. White precipitate, 5 grains; powdered sugar, half an ounce.
4. Red precipitate, 5 grains; powdered sugar, half an ounce.

An essential precaution is to clear out, in the first instance, the nasal fossæ, by sniffing up tepid or cold water, so as to remove any crusts or mucous secretions. It is to the mercurial powders I have recourse in the first instance. The patient should inspire vigorously a pinch by each nostril, and this should be repeated twice or thrice a-day according to the amount of irritation produced. Physicians are not in general sufficiently alive to the irritating action of red or white precipitate; as they are apt to create great irritation, only a small number of inspirations should be prescribed daily, and only for a few days. The immediate effect of these powders is occasionally most remarkable, the fœtor sometimes disappearing, temporarily, it is true, in the course of a few hours.

If we must be cautious in the employment of mercurials, there is no such necessity in the case of the mixture of bismuth and talc, which the patient may inhale as often as he pleases, and which seems to have a really beneficial influence. The chlorate of potash is also a modifier of the mucous membrane, and has the advantage, that, like the mercurials, it causes the odor to disappear whilst it is being employed.

In adults, where obedience can be counted upon, the inspiration of powders, though by no means satisfactory, renders real service; in children they are almost useless, and we must have recourse to injections, which will then be the almost exclusive mode of treatment, whilst in adults they are merely subsidiary.

1. Phagædenic water (yellow wash, more or less diluted).
2. Chlorate of potash, 60 grains; distilled water, 7 ounces.
3. Nitrate of silver, 1 grain; distilled water, 3½ ounces.
4. Sulphate of copper, or sulphate of zinc, 1 grain; distilled water, 3½ ounces.

It must be remembered that the pituitary mucous membrane has a much greater sensibility than is generally supposed, and that even very diluted solutions are borne with difficulty. This sensibility is soon blunted, but the solution should never be much stronger than the above.

The injections should be practised two, three, or four times a-day for several successive days, then recourse may be had to the powders, and so on alternately, care being taken to regulate their strength according to the irritation produced on the mucous membrane, and the influence exerted on the disease. The remedies must often be continued for months without interruption, and when the fœtor has been absent for six weeks or a month, the severity of the treatment may be relaxed.

There is an important practical point to be alluded to. It is generally noticed that at the menstrual period the ozæna augments; and that this also occurs at any time when an inflammation of the pituitary membrane supervenes. Accordingly, under these circumstances, the treatment must be resumed, even if the patient had appeared to be perfectly cured.

Although topical remedies are the most important, we must not neglect general treatment. Cod-liver oil continued for a long time is often useful. Tincture of iodine, given at meal times, in doses of from 5 to 15 drops, seems often to have a good effect. Arsenical preparations persevered in for a length of time seem often to assist the topical medication.

In the treatment of syphilitic ozæna, mercury and iodide of potassium hold the first rank. As to necrosis, disease of the antrum, &c., their treatment is surgical.

I cannot conclude without repeating that this most disagreeable complaint is one of the most difficult to cure, but that it is also one

of those which may be best palliated, if we can be assured of the cleanliness, the docility, and the patience of the sufferer, provided that this patience be only equalled by that of the physician.—*Edinburgh Medical Journal*, from *Bulletin Général de Therapeutique*.

PYÆMIA, OR LEUKÆMIA.

By GEO. R. WEEKS, SURG. U. S. V., IN CHARGE OF CHURCH HOSPITAL, MEMPHIS, TENN.

HAVING recently been much interested in various pathological conditions resulting in pyæmia, leukæmia, or leucocythæmia, and believing that I have observed some facts of interest in this disease, I submit the following observations, taken at the bedside, with a view of calling attention to the true nature and conditions found in those affected by this particular grade of action. If I can be able to contribute in the least degree to this end, I shall feel myself amply rewarded. I believe it closely allied to *hospital gangrene* and blood poisoning, and generally it has appeared to be the sequence of these diseases.

The ideas that I shall present were taken from the observation and treatment of *one hundred and seventy-five* cases of hospital gangrene, one hundred and fifteen of which were observed and reported on by me, in Louisville, Ky. Six occurred in the 17th Army Corps Hospital, at Vicksburg, Miss., of which I had the charge, and fifty-four at this Hospital, during the month of August, with what results will be shown by the following table:—

Summary of Cases treated by Bromine, locally, and their Results.

No Treated.	No. Recovered.	Died.	Died of						Flesh Wounds.	Flesh Wounds, Bone involved.	Average time of arrest. Days.
			Gangrene.	Pyæmia.	Thrombus and Sepsis of the blood.	Mechanical Pneumonia.	Cellulitis.	Diarrhoea.			
146	134	12		3	5	2	1	1	104	42	4.26

Summary of Cases treated without Bromine, and their Result.

29	20	9	4	3	1	1			24	5	18.8
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Fifty-three of these were treated locally by pure bromine, and the average time of arrest was 1.92 days, seldom requiring a second application. Ninety-three were treated by compound balsam of bromine, average time being 8.66 days; and twenty-nine cases were treated by the usual methods, the average time of arrest 18.8 days. All had the same constitutional treatment, and were alike situated in other respects.

The facts noticed during the treatment of these cases point to

the following views with regard to its pathology. That hospital gangrene is produced by a *specific animal poison*, and that it only enters the system by inoculation upon a traumatic surface. That for a variable time after it is deposited upon or in the sore, it is local in character, after which it enters the blood through the agency of the absorbent system, and changes its constituents both vitally and chemically. I have designated this the stage of toxæmia, in which the blood is morphologically changed, the result being thrombus, which, in my opinion, is the plastic portion of the blood, aggregated and semi-organized, necessarily rendering the remainder aplastic and of little use to the economy in the work of repair. I have many morbid specimens now in my possession, that clearly establish the truth of these propositions, in illustration of which allow me to cite a few cases.

Adam Brangle, a private of 1st U. S. Inf'ty, was brought to the 17th Army Corps Hospital, at Vicksburg, Miss., with gangrene of stump of right arm, which had been amputated several days previous to his admission. Upon examining him, I diagnosticated mechanical pneumonia of right lung. He complained of pain in the heart, and over lower lobe of right lung, which then gave a flat sound, with dulness extending upward, and with entire loss of vesicular resonance. No crepitus was heard in the part or above it.

I treated the arm locally, with pure bromine, which arrested the gangrene promptly, and the sore continued to granulate feebly until near death. The pulmonary difficulty continued upward until the entire right lung was involved and half of the left, when he died. I examined him carefully, and noticed his symptoms three times a day, myself, during the time he was under my care, being much interested in his condition.

Autopsy, twelve hours after death. The right lung was very much enlarged, so heavy that it readily sank in water, and so large that it filled the right side of the thorax entirely. Upon section, it presented innumerable dark-colored points of all sizes, which were traced back to where they could unmistakably be seen to be in the pulmonary artery. I hazard little by saying that nearly all the vessels in the right lung were occluded by thrombi. Also a portion of the left was in the same condition, and in none of them was there any signs of a retrograde movement or softening. This was a rapid case, and one that finely illustrates the mode of dying, which was undoubtedly from obstruction of a purely mechanical nature, so far as the lungs were concerned, producing an excess of carbonic acid in the blood, and a deficiency of oxygen from pressure on the vesicles and obliteration of air space. This is the first stage, or one necessary link in the pyæmic process.

II.—James A. Beaver, private Co. A, 33d Iowa Inf'ty Vols., was admitted to this Hospital July 30th, 1863, with gangrene of the ankle, involving the ankle-joint and instep. I examined him Aug.

8th, and diagnosticated thrombus and septic poisoning. I made an unfavorable prognosis. Gangrene had been present since July 17th, and was promptly arrested by the use of bromine, locally, August 12th, but no repair was established. The wound kept clean and had no foetor. He died August 18th.

Autopsy, ten hours after death. The pulmonary vessels were filled with a dark-colored, semi-fluid substance, and at points portions of unsoftened thrombi yet remained. In some of the larger vessels thrombus was still entire; in others, where the pressure was greatest, softening had commenced. Softening was also observed in the parenchyma, always most advanced in that part nearest the vessel. I found a large thrombus in the left side of the heart, more than half of it softened, and softening of the walls of the heart, with which it came in contact. It looked of a purple color, had a gangrenous odor, and was easily broken down between the thumb and finger upon moderate pressure. I take it that this case points to the transition stage from thrombus to true pyæmia, and marks the process quite clearly.

Death, perhaps, was produced by ichoræmia, depraved or perverted nutrition, caused by the septic condition of the blood, the morbid element of which was due to softened thrombus, and the product returned to the general circulation rendered it more poisonous.

III.—J. H. Sutton, private, Co. I, 36th Ind. Inf'try Vols., passed through both the above-mentioned stages, and died of the next, or of true pyæmia. Metastatic abscesses were found in the lower lobe of right lung, of all sizes from a millet seed to that of a walnut, and also thrombi, entire and softening, forming new centres for abscesses. The man had been sick a long time, and had gangrene in the popliteal space, which had been arrested previous to death some considerable time, but not in time to prevent ichoræmia.

I cite these three cases as marking the stages leading to the state of pyæmia distinctly and clearly. I have endeavored to present the facts as I have observed them, and let the results follow. *Post-mortem* appearances are nature's teachings, before whose power our most subtle theories and ingenious hypotheses must bow in humble submission. I have examined all that died, in every one of which I have found thrombus in the heart and lungs, in some of the stages before mentioned, in consequence of which I am inclined to look upon them as a necessary condition. I am fully persuaded that Virchow is right in calling it leukæmia, as I shall endeavor to prove hereafter. These remarks are not only true of gangrene, but are equally so of all that class of diseases arising from blood poisoning, in which also ichoræmia plays a secondary part. I am not sure but that it will enable us to explain all the phenomena presented. The accompanying symptoms are very analogous to those arising from the bite of a venomous serpent, and perhaps what will cure

one will arrest the other. I said in the commencement that, primarily, I believe it to be local, and that it passed into the blood by the agency of the absorbents, when toxæmia was produced; but how is this brought about? In what manner are these changes produced? I answer, 1st, By contact of the morbid agent with the traumatic surface. 2d, Transformation of cell contents, which I am inclined to believe is the result of oxydation. 3d, Absorption of the ichorous product, which causes a retrograde movement in the part and also in the constituents of the blood, which I think is chemico-vital in character. The corpuscular change is quite apparent by the aid of the microscope. The red corpuscle loses its hæmatine, which, becoming granular, is deposited in a circle, and aggregated around the outside of the field. The white corpuscles are very abundant and occupy the whole surface. Crystals of ammoniacal salts are formed in abundance, and an occasional fungus may be seen. Virchow teaches that it is not possible for substances, or rather particles of matter to pass through the lymphatic glands, as in the case of cinnabar and tattooing they are arrested and detained there. I cannot say how it is accomplished, but of the fact that the morbid agent does pass the glands, I am well satisfied, and as these are the last row of sentinels to contend against, I can see no reason why it should not proceed onward to the blood. I have a case in point.

James Scott, private, Co. A, 1st Mo., died at this Hospital, on Sept. 3d, in whose thoracic duct I found a well-developed thrombus. I sent it to Surgeon Brinton, U.S.V., Washington. It was about four inches long, and largest in the portion that occupied the receptaculum chyli. It is the first case that I have ever seen or heard of. The glands were enlarged, indurated, and of a dark color, as if filled with pigment granules, which I very much suspect they were. The ichor undoubtedly had passed, as its effects were demonstrated by thrombus in the duct. If so, the whole process corresponds very nearly to Virchow's idea of their function. This case conclusively presents three very important facts, viz.: That the poison, whatever it is, passes through the lymphatic gland; that it is capable of producing thrombus upon the other side, and that the morbid element does not reside in the pigment but in its ichor. I am of the opinion that this settles a vital point in the pathology of leukæmia.

The death of the parts afflicted by gangrene is a molecular one, and I believe should occupy an intermediate position between ulceration and mortification. It is always accompanied by asthenia.

Of the cases observed here during the month, the average temperature of the body was 89° Fah., and the number of pulsations was 101, which significantly pointed to the manner in which they die, and to the indications for treatment. In the formation of thrombus I have invariably found them of the shape of the vessels,

upon the right side, and globular upon the left, and in the latter seldom extending into the vessels. I have one of the left auricle now, weighing 482 grains, and one of the right side, representing every branch of the pulmonary artery, which had its attachment to the right ventricle.

It will be inferred, from what I have said previously, that I regard the disease as curable, before its consequences are constitutionally developed. This is exactly what I at present believe. I can see no reasonable prospect of reaching it afterwards, and would not know how to make a rational prescription, with my present views of its pathology, other than to support. Upon the appearance of thrombus in the *heart* and *lungs*, which is easily detected by physical signs, hope with me ceases. Some may recover, but I have not seen them. The rational remedies indicated I believe to be, oxygen, fluorine, chlorine, bromine, &c. I expect much from the judicious application of the former, and shall try it as soon as opportunity offers. Fluorine is too dangerous. Chlorine can only be obtained in a fluid state, under great pressure, or in the form of mechanical mixture, hence the selection of bromine, which is in the best form, easiest of application, and over which condition I believe it to have a specific influence. I am of the opinion that it will arrest gangrene wherever it can be brought in contact with all the pulp or pultaceous matter. This is very difficult to do in the burrowing form of the disease, and also, from the nature of some wounds, it is nearly impossible to reach every part with the remedy.

I have been industriously seeking an agent that would destroy poison in the blood, or counteract its effects, but up to the present time have found none. I first tried the hyposulphites, then bromine by inhalation, and then internally. I have observed no beneficial effects from the hyposulphites, or the inhalation of bromine, but am inclined to believe that the internal administration of bromine is of some value, how much I am unable yet to determine. I am now putting it to a severe test, in all the cases under my care, and noting its effects closely, with a view to settling this point. I am using the following formula:—*R.* Bromin. sol. comp., f ʒ ij.; aquæ distillat., f ʒ ij.; syr. simp., f ʒ ij. *M.* S. Teaspoonful every six hours.

I am favorably impressed with the remedy, but will not be able to speak with certainty until I have tried it for a longer period, and observed its effects more closely.—*Chicago Medical Journal.*

THE New York Society for the Relief of the Widows and Orphans of Medical Men has a fund of about \$50,000, mostly invested in mortgages and 5-20 U. S. bonds, and at present has but few pensioners.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 7, 1864.

WORK FOR THE BOSTON MEDICAL ASSOCIATION.—How much or how little truth there may be in the popular belief in relation to the want of unanimity of opinion among medical men we do not care to consider, but we do not hesitate to affirm that upon one subject at least, which has been brought before every member of our profession during the past week, there has been no difference of opinion. At the end of a year of unprecedented prosperity among nearly all classes of the community we cannot help reflecting, as we apply ourselves to the pleasant task of making out our bills and strike the balance between our expenditures, in which there can be no mistake, and our prospective income, of the amount of which, alas! we are never sure, how unfairly the times are affecting us. Our marketman, our grocer and tailor and coal merchant, and all our patients in their various callings, have not failed long ago to discover that a dollar no longer represents what it once did, and accordingly, like sensible men, have advanced their prices in conformity to the depreciation of money. If M is obliged to pay C twelve dollars for a ton of coal, he demands an equivalent price for the beef he sells him, so that at the close of the year they all find their income unaffected by the universal increase in the expenses of living. We, however, have gone on paying them on the spot all they demand, while for our own services we have been foolishly content to ask them to pay, if they please, a price fixed for us long ago, and almost as little proportionate to the present standard of money as if it were expressed in wampum. And it is this reflection which has come to every physician during the past week, in sight of the immense difference in the relative increase in the amounts upon the debit and credit columns of his account book, that some concerted and immediate action should be taken with regard to the reformation of the present fee-table. We say concerted, for we know that certain gentlemen, whose patients are the rich and whose incomes are such that household expenses need cause them no anxiety, have taken independent action in the matter, and pay little if any regard to the laws of our medical police, while the young and less fortunate are obliged in most cases to be content with the old minimum fee and dare not exceed the maximum in their few "best families." Did the amount of practice like other business increase in proportion to the surrounding prosperity, we might find in such increase the remedy for our present wants; but fortunately for mankind, plenty and joy do not make the sick list larger, but smaller, and the physician's services are most in demand when adversity and poverty deprive the patient of the means of repayment. We trust, therefore, that the Boston Medical Association will take the matter into earnest consideration, and revise their present code at this opportune season, so that the public may be informed at the beginning of the year of a change, which should have been made long ago.

RESECTIONS.—At the meeting of German naturalists and physicians held at Stettin, in September, 1863, there was a discussion in relation to Resections, which is reported as follows in the *Allgemeine Wiener Medizinische Zeitung*.

Bardeleben had performed the operation 7 times upon the hip-joint and 9 upon the knee-joint, the result being so favorable that only three of the cases were fatal. He explained at length the method of operation, praised the plaster bandage in the after-treatment, and dwelt upon the two following important points for the success of the operation:—

1. None of the capsule of the joint should be allowed to remain.
2. The after-treatment must be carefully and minutely attended to. A plaster bandage strengthened by strips of wood is best adapted to this purpose; and it should be water tight, so that the water bath may be employed.

The subsequent discussion had special reference to these four points: mortality, use of the limb after operation, its management and after-treatment. Wilms stated that of 6 resections upon the hip- and of the same number upon the knee-joint, 4 of those operated upon died; Mitscherlich said that of two cases of the knee-joint in Langenbeck's clinic, one of them recovered with ankylosis, the other with a movement of twenty degrees; there were also four or five resections of the hip-joint, and of these only two remained alive. Wagner performed two resections at the knee-joint, one with a favorable, the other with a fatal termination. In Bardeleben's cases one walked without a cane, two with a cane, the others with two canes or crutches. Heyfelder saw all the patients he operated upon at the knee-joint die of pyæmia; with those at the hip-joint he obtained a better result. In Paris they are now entirely opposed to the performance of this operation upon the knee-joint, partly for the reason that they have made too large incisions there, which will account for the unfavorable results of the operation and the prejudice against it. Manuel saw among four resections of the knee-joint two favorable and two unfavorable results. Eulenberg observed that resections in London were undertaken with the best success, while in Paris the unfavorable results were due to the bad condition of the hospitals. Bardeleben maintained that all these data were far too limited and indefinite to furnish material fit for statistics.

With regard to the second point, the usefulness of the extremity, Wilms stated that two of his patients could not walk without a cane; to which Wagner replied that one could judge the result of the operation in this respect only at a much later period, inasmuch as it was often the fact that shortening as well as ankylosis and cure resulted at a very late period, an observation which Bardeleben confirmed. There had been a distinction made as to whether the operation should be performed after carious destruction of the bone or after gun-shot wounds, and Stromeyer had expressed himself against it in the latter case, still Bardeleben thought this precaution should not be too closely observed, and Manuel had shortly before communicated a case, where the resection of the knee-joint had been attended with the most favorable result after a gun-shot wound. Friedberg observed that the limb should be brought into a middle position between flexion and extension.

Wagner recommends the removal of the patella on the following grounds:—1. Because in the desired bony ankylosis it is no longer necessary; 2. Because the preservation of the synovial capsule is very difficult; 3. Because it afterwards undergoes morbid changes and may interfere with the cure. Simon observed that Langenbeck preserves the patella in order to render a slight mobility of the joint possible, and further that Roser's method of resection of the hip-joint was very difficult; he had attempted its performance only upon the dead body. Wilms and Bardeleben also confirmed its difficulties. Ravoth asked if the converging of the whole wound by a firm bandage was injurious. Bardeleben thought this was not desirable, since the wound must heal by suppuration, although the air should be kept from it as much as possible, in order to protract the suppuration. Eulenberg inquired whether ankylosis furnished an indication for resection? Bardeleben answered in the affirmative, in case the anticipated favorable result of the operation outweighed its dangers. Simon and Wagner were of the same opinion.

THE following is a list of the physicians and surgeons appointed for the new City Hospital. The selection has been made with rare judgment and good sense. The community is under great obligations to the gentlemen through whose influence these appointments have been made. We congratulate the medical profession, also, that they are so well represented in the administration of the new hospital.

Consulting Physicians and Surgeons.—Drs. John Ware, John Jeffries, A. A. Gould, S. D. Townsend, Winslow Lewis, Silas Durkee.

Visiting Physicians.—Drs. John C. Dalton, Wm. W. Morland, Fitch Edward Oliver, J. Baxter Upham, J. N. Borland, J. G. Blake.

Visiting Surgeons.—Drs. Charles H. Stedman, Charles E. Buckingham, Duncan McB. Thaxter, Charles D. Homans, Algernon Coolidge, David W. Cheever.

Ophthalmic Surgeon.—Dr. Henry W. Williams.

PSYCHOMETRY.—Spiritualism has undergone a new development. Satiated with the commonplace and fruitless triumphs of bewitching furniture, floating in the air, and interpreting raps, the mediums have made a fresh start, and now announce that they have acquired the power of reproducing in all its vividness and completeness the mysterious past. The process by which this is accomplished seems an easy one. It is called psychometry, and the favored few who possess the retrospective power are known as psychometers. Most, if not all, the psychometers are feminine, and American. These gifted ladies, by merely touching a piece of anything—be it bone, or stone, or aerolite, or even a fragment of crockery—can immediately tell all that has ever happened to it. In the case of a piece of bone, contact immediately informs them everything about the animal to which it belonged, the circumstances under which it lived, the scenery and conditions by which it was surrounded, its habits and sensations. And this is not all. The psychometer is transported at once to the part of the globe which the animal has inhabited, and is able to describe all the features of the journey. Or if it be a stone, she can directly give information as to its geological belongings, the formation whence it was derived, the place from which it was taken, and all the vicissitudes it has undergone.

Mere handling is enough, but usually the psychometers place the substance in contact with the forehead. One lady, by sitting in the moonshine and allowing the beams to play on her forehead, got such an insight into the structure of the moon that she immediately described it in full to the astonished bystanders. Mrs. Denton, of Boston, U.S., thus described her sensations on having a whalebone cane applied to her forehead:—"I feel," she said, "as if I were a monster. I feel like vomiting. Now, I want to plunge into the water. I believe I am going into a fit. My jaws are large enough to take down a house at a gulp." Another, on being placed in contact with a boulder, expressed her feelings thus:—"Mercy! what a whirl things are in! I do not know what to make of it. I feel as if I were being belched out of a volcano. Here is water and mud, and everything is in great confusion. There are great pieces of rock beside me, some larger than I feel myself to be, though I am of great size. I am sent up whirling in a torrent of water, mud and rocks; not sent out at once, but in alternate puffs, and all of us flying round together." Of course as the vicissitudes to which matter is subjected are numerous, the ladies describe their sensations as somewhat complicated, but they tell us that by an effort of the will they can fix for a time the more interesting scenes as they pass before them. This, no doubt, is a fortunate and pleasant thing for the psychometers. As the dust of "imperious Cæsar" may stop a bung-hole, the passage of the Rubicon would be a more striking experience than the lengthened vision of a beer barrel. And we should hope, for the lady's sake who was mentally metamorphosed into a whale, that she did not permit the qualmishness and threatening fit to last long. We wonder, by the way, whether these are the normal feelings of whales. The husband of the fair cetacean asserts that this experience was accompanied by universal shuddering—but this might perhaps be accounted for by the cold sea-bath in which she was psychometrically plunged. We really congratulate the mediums on having struck out a new path. It is true that for many the mysterious future has even a greater charm than the mysterious past, but the former is a somewhat used-up region, the field of prophetic vision being already occupied by Zadkiel and numerous other seers, lay and clerical. We would only observe that in adopting the opposite course the mediums have taken the field against science, and the latter must look to her laurels. Alas for Owen, Falconer, Huxley, and the doughty *savans* who Samson-like have attacked an unbelieving world with the Abbeville jawbone! Their occupation's gone. It was thought a wonderful feat to construct the skeleton of the *Dinornis* from merely looking at a piece of its femur; but what is this to being able to give a description of a vast number of animals of the tertiary era, whose existence is as yet unknown to geologists? We are very anxious to know whether this resuscitated fauna would supply the missing links for Mr. Darwin. A full view of the early inhabitants of England has already been vouchsafed to one lady, and we have the satisfaction of learning that they were "scarcely human, incapable of standing upright, though formed so as to sit comfortably; very hairy, with a good deal of fun and frolic, and with a crescent-shaped mouth." All these, and many more wondrous revelations are seriously recorded in a book entitled "*Nature's Secrets; or Psychometric Researches*," written by a Mr. Denton, who styles himself a Lecturer on Geology at Boston,

and edited by an anonymous English clergyman. Truly these gentlemen must have formed an exalted estimate of human credulity!—*London Medical Times and Gazette.*

EIGHT LIVING CHILDREN IN TWO YEARS.—Dr. Pomeroy, of Wisconsin, reports, in the *JOURNAL* of to-day, a remarkable case of fecundity in a patient under his care. This case bids fair to exceed, in the number of living offspring, any of the cases referred to by Dr. Warren in the *JOURNAL* of May 22, 1862; and we trust Dr. Pomeroy will not fail to keep the profession informed of the ratio of increase hereafter, and also of the state of health of the children now living, with various other particulars connected with so remarkable a case.

THE number of deaths recorded in Boston during the last year was 4698, being 578 more than during the previous year.

The deaths in the town of Sudbury, Ms., during 1863, numbered 40; average for the six preceding years, 23½. The average age of the whole number last year was about 54½ years; seventeen were over 70, and one over 100. The population of the town in 1860 was 1693.

In Newport, R. I., during the last year, sixty-one persons died who were over 70 years of age, two being over 100.

The amount of expenditures at the City Infirmary, in Cincinnati, Ohio, during the year preceding the last annual report, was \$88,634.29, being \$6000 less than the amount paid out the preceding year. There were 14,035 applicants during the year—9,139 less than the year before.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 2d, 1864.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	55	51	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.4	39.9	80.3
Average corrected to increased population	00	00	87.87
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Diphtheria.
20	8	7	13	0	0	1	3

PAMPHLETS RECEIVED.—Death: its Economy and Beneficence. An Address delivered before the Medical Class of the University of Vermont, Tuesday evening, June 9th, 1863. By Henry M. Seely, M.D.

DIED.—At Swanton, Vt., Dec. 22d, Dr. Seneca E. Parks, aged 53 years.—In Texas, Sept. 9th, of typhoid fever, Ariel I. Cummings, Surg. 42d Mass. Vols., late of Roxbury.—In Wareham, Jan. 5th, suddenly, Dr. Benjamin F. Burgess, aged 40 years.—At Walpole, N. H., 30th ult., Dr. Ebenezer Morse, 78.—In Colchester, Vt., Dr. John S. Webster—a prominent citizen of the town.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 2d, 106. Males, 55—Females, 51.—Accident, 4—anaemia, 2—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 2—inflammation of the brain, 1—bronchitis, 1—burns, 1—consumption, 20—convulsions, 2—croup, 8—diphtheria, 3—dropsy, 3—dropsy of the brain, 4—scarlet fever, 7—typhoid fever, 1—disease of the heart, 4—homicide, 1—infantile disease, 2—intemperance, 2—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 13—old age, 2—paralysis, 4—peritonitis, 1—pharyngitis, 1—pleurisy, 1—rheumatism, 1—scalded, 1—srofula, 1—tumor, 1—whooping cough, 1—wounded in battle, 1—unknown, 5.

Under 5 years of age, 40—between 5 and 20 years, 6—between 20 and 40 years, 23—between 40 and 60 years, 20—above 60 years, 17. Born in the United States, 68—Ireland, 27—other places, 11.

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NOTES OF OPHTHALMIC PRACTICE.—NO. I.

BY HASKET DERBY, M.D., BOSTON.

[Communicated for the Boston Medical and Surgical Journal.]

TARSORAPHY.

MR. B., aged 60, a resident of New Hampshire, came to consult me a few weeks since. Last July his head was caught between a granite post and a heavily-loaded cart, the result being that the jaw was broken in two places, and the right side of the face completely paralyzed. The vision of the left eye was entirely destroyed. At the time of his visit to me the facial paralysis was less complete than before, but his principal source of trouble was his inability to close his right eye, owing to the loss of power in the orbicularis.

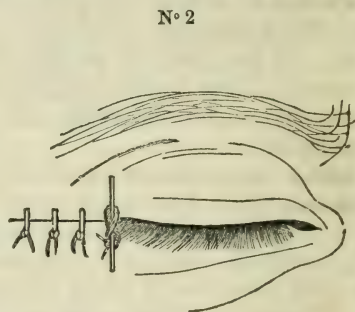
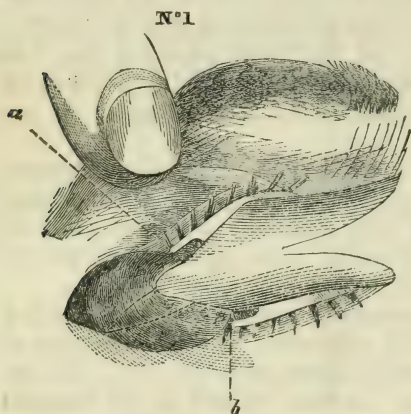
The *left* eye was externally normal and retained its normal powers of motion. The pupil acted sympathetically, but dilated and remained fixed when the other was covered. No perception of light, either qualitative or quantitative. The ophthalmoscope revealed commencing white atrophy of the optic nerve entrance.

The vision of the *right* eye remained nearly unimpaired, being affected only by a slight superficial ulceration of the lower part of the cornea, consequent on continued exposure to the air. The upper lid could be raised with ease, but was obliged to be brought down with the finger whenever the patient wished to close the eye, its unaided descent being very slight. The lower lid, without being everted, had fallen some distance below its usual level, and remained at least two lines below the upper, when this had been brought down as far as possible, leaving the globe uncovered to this extent. The conjunctiva, both of lids and globe, was reddened and somewhat inflamed. There was almost constant pain in the ball of the eye, and the ulceration of the cornea was fast progressing. The desire of the patient to be relieved from this pitiable condition was naturally excessive.

Two principal operations suggested themselves, the one being the removal of a V-shaped piece from the centre of the lid, the

other the removal of a similarly shaped piece from the external commissure, and the diminution of the palpebral aperture by uniting the edges of the wound. The first has long been the standard method; it is open, however, to several objections. The irregular shape of the edge of the lid at the point of union is apt to interfere with the proper passage of the tears; the main difficulty, however, is that this operation does nothing towards raising the outer commissure, and, in the case of prominent eyes, the lid, shortened as it is, is apt to hug closely the lower part of the bulb and prevent the closure of the eye.

The other operation appeared open to neither of these objections, and was accordingly performed. The patient having been well etherized, and the external commissure of the lids raised from the bulb and supported over a blade of horn, a lance-shaped knife was passed in, just at the angle of the lids, over the tarso-orbital fascia, and the integument thus raised and separated from the subjacent structures over a surface stretching some five lines back from the commissure. The same splitting process was carried forward into the lids themselves, the hair-bulbs being separated from the Meibomian glands for a distance of about four lines from the angle of the lids



to the lines marked *a* and *b* in Fig. 1. From the point where this dissection ceased, the inner edge of each lid was lightly pared about three quarters of a line farther on, but behind the eyelashes. Commencing from the lines marked *a* and *b* on the upper and lower lids respectively, vertical incisions were made through the integument of the lid down to the cartilage, and these cuts carried downward and forward in a direction parallel to the edge of the lid, till they met at a point on a level with the angle of the lids, and some five lines from it. The integument, including the eyelashes, embraced between these incisions was now dissected away, and the edges of the wound united by four sutures, as in Fig. 2, a wisted suture being taken anteriorly. Care was taken, in passing

the pin for the first suture, to approximate the points where the incision in each lid had commenced, more having been removed below than above, in order to raise the lower lid into a proper position. The point at which these incisions should be commenced, and the amount of skin to be removed, must vary naturally according to the circumstances of each individual case and the effect designed to be produced.

Tarsoraphy, as the above operation has been called since its first introduction by Walther, owes the prominence it has obtained in modern ophthalmic surgery to Graefe, who (*Archiv*, Vol. IV., part 2, p. 201) describes the operation and gives the indications for its performance. It is applicable to those cases where a considerable lengthening of the lid, together with a thinning and loss of tone of the cartilage, has taken place; in marked cases of paralytic ectropion; in cases of ectropion of the lower lid dependent on cicatrices or traumatic solutions of continuity of the external commissure; in ectropion of the lower lid caused by cicatrices of the external covering of the lids or neighboring parts; and in exophthalmus. The method of performing the operation in the above case differs somewhat from that given by Graefe, and is due to Stellwag von Carion, from whose book* are also taken the two engravings.

The sutures were removed on the third day. Union by first intention had taken place, the lower lid was raised into a normal position, and with the aid of the finger the upper lid could be closely approximated to it. The ulceration of the cornea had nearly, and the pain entirely disappeared. The patient shortly left for home, and as he promised to write me in the event of anything going wrong, I have no doubt but that the relief continues to be complete.

GRAEFE'S "MEASURER OF REFRACTION,"

An Instrument designed for at once expressing the Strength of the Glass that will enable a given Patient to see distant Objects with distinctness.

With this instrument the patient is enabled to himself designate the glass he requires, without going through with the routine test of trying one lens after another. And the conscript who seeks to escape active service on the ground of myopia, if tested by means of this, must either at once conclusively establish the truth of his statement, or as quickly give results so inconsistent as to stamp him as an impostor.

An eye, possessing a normal power of refraction, and healthy in other respects, sees distant objects with distinctness. Neither convex nor concave glasses improve vision, because such an eye under such circumstances is adapted for receiving parallel, and not convergent

* Manual of Practical Ophthalmology. Vienna. 1861.

or divergent rays. A hypermetropic eye sees distant objects distinctly by the aid of a convex glass, and the strongest glass that fulfils this condition expresses the grade of the hypermetropia. And the weakest concave glass that does as much for a myopic eye shows the amount of myopia present.

These are points that must be ascertained in order to make a satisfactory analysis of any case of the kind. And since the choice of glasses has definitely passed from the hands of the optician into those of the physician, it has become customary for the latter to provide himself with a "spectacle case," containing, besides colored glasses and prisms, a large collection of the various convex and concave lenses, ranging from $\frac{1}{2}$ to $\frac{1}{60}$. Trials must be made with these glasses until the true state of the refraction is ascertained. But in actual practice this process, though reasonably sure, is mechanical and monotonous to a degree, and frequently demands considerable time. It becomes sometimes necessary to go through with a long series of glasses more than once before the patient can make up his mind, the interval consumed in removing one pair of glasses from before his eyes and adjusting another, proving—especially in hypermetropia—a disturbing element of some importance. Some delay, too, is occasioned by the necessity of continually polishing the glasses as they become dimmed by frequent contact with the hand; and the danger of misplacement in a box containing more than a hundred different glasses is considerable, and renders constant watchfulness necessary.

To shorten the process and do away with these inconveniences, Prof. von Graefe has imagined a "measurer of refraction." It consists of two tubes, the one sliding within the other by means of a screw. The inner tube contains a convex glass and the outer a concave, the whole affair being nothing more or less than a single-barrelled opera glass, on a large scale. The outer surface of the inner tube is appropriately divided off, and each division numbered; the extent to which this inner tube is screwed out thus showing the amount of myopia or hypermetropia present in a given case, as well as the glass required to correct it. It should be mentioned here that myopia and hypermetropia are, in the present form of the instrument, determined by separate eye-pieces. These, however, by a simple contrivance, can be changed without removing the eye of the patient from the aperture. The whole affair is mounted on a stand with a firm base, and can be raised or lowered at pleasure, as well as directed at any angle.

I have thus far employed the instrument on the letters of Snellen or Dyer as test objects, using first the one and then the other, when the eyes are examined each for itself. The management of the screw is left to the patient himself, he being simply requested to turn it until the maximum of distinctness is attained.

The instrument has been in my possession but a few weeks, but

even that short period has sufficed to show me its great practical usefulness. Its accuracy, especially in hypermetropia, is all that could be reasonably expected.

Professor von Graefe justly alludes to its value in cases of astigmatism. Few practitioners who have had occasion to examine one of these cases, but must have been struck with the large amount of time necessarily consumed in ascertaining the refraction of the eye in the meridians of greatest and least corneal curvature, and in setting the various convex and concave glasses in and removing them from the stenopaic apparatus. All this is now vastly simplified. A metallic cap, furnished with a narrow slit, fits on over the eye-piece of the instrument. The meridian of greatest curvature having been ascertained in the usual manner, the slit is brought into the proper position and the refraction in that meridian ascertained. The slit is then turned at right angles to its former position and the process repeated. The amount of astigmatism is thus directly ascertained. I should mention that I found it necessary to considerably reduce the width of the slit as I received it from the makers.

The instrument is made by Paetz & Flohr, of Berlin.

TWO CASES OF CUTANEOUS SYPHILIS TREATED BY MERCURIAL INUNCTION AFTER LONG-CONTINUED AND INEFFECTUAL USE OF IODIDE OF POTASSIUM.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

BY JAMES C. WHITE, M.D.

IN December, 1862, Dr. J. requested me to visit a woman, whom he described as one of the most frightful objects he had ever seen. She was found lying in a dark and dirty room in Beach St., miserably clad, and presenting a most pitiful appearance. Her previous history was briefly as follows. She had formerly been a servant in the family of a lady, who gave her an excellent character for tidiness and virtue. She had been married several years, had had two children, both living and well, and had herself enjoyed perfect health until July, 1860. At that time she was nursing her youngest child, and at first attributed to this a feeling of weakness and a discharge from the private parts, which gradually increased in amount, until an abscess in one of the labia, of the size of a pigeon's egg, led her to visit the Dispensary, where she obtained a wash, which, as she states, stopped the running in two weeks. Some six weeks afterwards an eruption "like hives" made its appearance upon her face and arms, with a sore throat, and later in the fall and winter a succession of ulcers upon the extremities followed. For this she consulted a physician, who recognized the nature of the disease and obtained from the husband a confession of having given the

same to his wife. What treatment was employed at this time cannot be ascertained, but it seems at all events not to have been of much benefit, for during the following summer (that of 1861) the ulcers were so bad upon her body that she says she was unable to lie down. In February, 1862, she was seen by another physician, who sent her to Rainsford Island Hospital, where she remained five months. During her stay, iodide of potassium was constantly administered, and for a time the ulcers seemed disposed to heal, but the activity of the disease persisted in spite of this treatment, and in June she was discharged, in the same condition as when she entered. She continued to take the same medicine, however, after her return to the city, and she remained in the same wretched state until December, when I first saw her.

At that time she was much emaciated and very weak, and although but 33 years old she looked more like a woman of 50. Her skin was of a dark, Indian-red, and her face closely resembled one encrusted by the eruption of confluent smallpox. Upon the legs and arms there were numerous large and deep ulcers, so that every motion was difficult and painful. The scalp and nearly the whole body were thickly covered with a pustular eruption and crusts interspersed with formations of dense, white cicatricial tissue upon the seats of former ulcerations, the latter offering a marked contrast to the universal coppery hue of the rest of the skin, produced by long-continued congestion. The sub-dermal glandular system was of course in an indurated condition, but there had never been any affection of the periosteum or bones. The voice was faint and husky, but only a congested condition of the mucous membrane of the fauces was noticed.

She was directed to pursue the following course of treatment:—

Mercurial ointment, of the size of two large peas, to be rubbed into the following parts of the body in succession each night—the inner surfaces of both calves, the thighs, the abdomen, the chest, the upper arms and lower arms. The inunction to be continued until the above quantity is thoroughly rubbed into the skin. In the morning, the parts to be washed with soap and water.

To take, also, one of the following pills twice a day: *R.* Hydrarg. bichlorid., gr. i.; aquæ, q. s. pro sol.; ext. gent., q. s. *M.* Ft. pil. No. 32; and of tr. ferri mur., gtt. xv. 2 t. d.

To the ulcerated surfaces applications for half an hour, three times a day, of a solution of ferri et pot. tart., one part; water, sixteen parts.

In ten days there was a marked improvement in the appearances upon the skin. Many of the crusts had fallen off, exposing a healthy surface, and the large ulcerating surfaces upon the limbs were rapidly contracting. The pills were then omitted, but the progress towards recovery continued rapid and uniform; a sore mouth during the third week, which was troublesome for a few days, but which

yielded promptly to a wash of chlorate of potash, being the only unpleasant symptom developed. The inunction was nevertheless still employed, but to a less extent, for several weeks longer. In six or eight weeks all the ulcers had disappeared, and the skin was whole for the first time for two years. Motion was restored to the limbs, and strength and flesh were rapidly regained.

December, 1863.—At the present time, Mrs. — is a well-dressed, nice-looking woman, and for nearly a year has enjoyed perfect health. On close examination, the skin of the face resembles a section of so-called nutmeg liver, owing to the punctiform deposition of dark-red coloring matter and minute formations of cicatricial tissue. The skin over the whole body is likewise discolored, and the cicatrices, which are larger and of irregular shape, occupy about one third of its superficial area.

CASE II.—Mr. — came to consult me Sept. 15th, 1863. He had acquired the disease by an infected chancre in June of the previous year. For the cutaneous appearances and a sore throat which followed, he placed himself under the care of his family physician, in a neighboring town, who gave him iodide of potassium. The symptoms continued, notwithstanding its use, and in the autumn a serious iritis made its appearance, which kept him within doors nearly all winter. In the spring, finding himself little better, the skin and eye still being the parts actively affected, he went to New York and consulted a celebrated syphilis doctor, who prescribed bichloride of mercury. Under this treatment the eye was restored to its former condition in a short time, but it seems not to have been used with sufficient thoroughness to cause the entire disappearance of the cutaneous appearances. During the summer, he continued to take, alternately, the bichloride and the potash salt, but with no decided effect, and in August he went to Sharon, where he remained a few weeks, using the sulphur baths freely, together with the iodide of potassium internally. The disease, however, seemed to be stimulated to a fresh activity by this treatment, and, growing weaker, he returned home and consulted me.

He was a man of a strong constitution, who had spent a prosperous life of great activity. He was of a very restless disposition, and his face wore a constant expression of anxiety, induced by the fear that the nature of his disease might be recognized by every person he met. The previous 46 years of his life had been passed in perfect health. His face was covered with numerous, large, red, acniform blotches, all of which were indurated, and several of which were in a condition of superficial ulceration. His back was thickly sprinkled with round pustular nodules, with which were interspersed several unhealthy-looking ulcers, which had penetrated deeply into the cutis. Upon the limbs were three or four large ulcers, one or two inches in diameter. The periosteum was affected at several points over the anterior surface of the tibia, giv-

ing rise to painful prominences of considerable size. The mucous membrane of the throat was in a healthy condition. The glands behind the ears, by the side of the olecranon and in the groin, were indurated. He was obliged to walk with a cane, and was in a very nervous and weak state, although the functions of the body were performed in a satisfactory manner.

The following course of treatment was advised:—

R. Ferri et pot. tart., \mathfrak{z} i.; aquæ, \mathfrak{z} viii., \mathfrak{z} i 2 t. d.

R. Ferri et pot. tart., \mathfrak{z} i.; aquæ, \mathfrak{z} ij., as dressing to ulcers, 2 t. d.

R. Hydrarg. bichl., gr. ij.; glyc., aq., aa \mathfrak{z} ss., for twenty minutes to blotches on face 2 t. d.

R. Iod. pur., pot. iod., aa \mathfrak{z} i.; glyc., \mathfrak{z} ss., to nodes every night.

R. Pot. chlorat., \mathfrak{z} i.; aq., Oi.; syr. rub. idi., \mathfrak{z} i., as a gargle four or five times a day.

Mercurial inunction every night in the manner described in the previous case. In this case, however, the treatment by inunction could be more systematically carried out, and accordingly he was directed to take a warm bath at night before using the ointment, and to lie in bed under heavy blankets three hours every morning beyond his usual time of rising. The diet was restricted to plain meats, milk, bread and fresh fruits, and he was advised to remain within doors.

On the 26th, ten days after the treatment was begun, the elevated nodules upon the face had diminished greatly in size and intensity of color, and all the ulcers were completely healed over. The nodes, also, were much flattened and no longer painful. Hope and strength were nearly recovered, and the appetite was excessive. As the teeth had become somewhat tender, it seemed best, in consideration of the fact that he had already taken mercury, to discontinue the inunction for a short time.

October 5th, the slight soreness of the mouth had entirely disappeared, and the ointment was directed to be resumed every third night. The strength was still greater than when last seen, and the periosteal affection was hardly to be detected.

October 15th.—One month from the day on which he was first seen there remained no other sign of previous disease than the discoloration which still remained from deposition of pigment in the sites of the old ulcers, and on that day he sailed for Europe.

These cases are presented to the Society as illustrative of the ease with which long-standing cases of syphilis yield to mercury, and of its superiority to iodide of potassium in the general treatment of the disease; also of the advantages offered by the inunction cure in point of rapidity of action and safety from salivation and cachexia, even in very debilitated states of the system.

ON REFLEX HEMIPLEGIA.

BY THOMAS PALMER, M.D., LONDON.

ALTHOUGH reflex paraplegia is a sufficiently well recognized and described complaint, and has met with special attention from Dr. Brown-Séquard and others, reflex hemiplegia has not, so far as I know, been equally well studied or recorded; and yet no one, I apprehend, will doubt its existence, or deny its at least equivalent importance. While distinctly mentioning reflex hemiplegia, and giving two or three illustrative examples in his Lectures on Paralysis, Dr. Brown-Séquard has devoted a comparatively small space to the consideration of this interesting and important affection. In the ordinary class books and authorities I have been unable to find its due place assigned to it as one of the kinds of hemiplegia that the practical physician must be prepared to meet and deal with. In Mr. Todd's admirable and minutely-defining Lectures on Hemiplegia, I have been unable to recognize a picture of this variety of the disease. Dr. Graves, in his Clinical Lectures (vol. i., p. 520), doubtfully indicates it, with, however, the differentiating condition of "with symptoms of general determination of blood to the head." Elsewhere I have only found isolated cases of it. Mr. Langston Parker, in his work on Disorders of the Stomach, gives a perfect case. A lady suffering from dyspepsia was seized with hemiplegia, which immediately disappeared on the action of purgatives bringing away pitchy stools. Mr. Austin, in his excellent "Practical Account of General Paralysis," states that persons laboring under that disease in connection with insanity, are not unfrequently seized with sudden hemiplegia, which can be almost immediately relieved or removed by purgative enemata, which bring away scybala (p. 52). These cases, however, are not those the ordinary physician is likely to encounter, and, occurring in patients otherwise peculiarly paralyzed, are less likely to embarrass. Dr. Handfield Jones, in the Sydenham Society's "Year Book" for 1861, quotes a case of hemiplegia with convulsions, caused by an insect in the ear. Having met with an instructive case of this kind, which was admirably illustrated by a subsequent ailment of another aspect in the same individual, I venture to think it worth recording.

A. B., aged 63, a house-agent, save for annual aggravations of chronic bronchitis, in good health. Temperate; free from rheumatism, gout, or constitutional syphilis; no albumen in urine; has no teeth, natural or artificial, yet eats meat. For years has suffered much from business anxieties.

April 4th, 1859.—Having had no fit or premonitory symptom, he was suddenly seized with hemiplegia of left side while walking from one room to another before breakfast. He was seen within a few minutes; was pale; looked dull and bewildered, and as he sat on the chair sank down to the paralyzed (left) side unless support-

ed. The muscular paralysis was complete in extent, though a small amount of feeble motion could be effected; mouth drawn to the opposite side; fluids taken dribbled partly out of the paralyzed angle; speech thick and indistinct; muscles relaxed; sensation and consciousness unimpaired. I regret that my notes do not state to which side the tongue was protruded, or the condition of the pupil. Pulse 90, excited; tongue furred at base. He was laid horizontal; cold applied to his (bald) head, and four grains of calomel immediately given. In two hours marked improvement was perceptible, no other means or remedy having been used. The bowels acted two or three times. He expressed himself as feeling much better, and had regained a considerable amount of power over his leg and arm. Six leeches, ordered at the first visit, were now applied to the temples (I did not then see the exact nature of the case); no stimuli employed.

The next day he could walk about the room, help himself with the affected arm, and when speaking deliberately, could articulate distinctly; when talking at all quickly, his words stumbled over one another now and then.

In four days no paralysis remained; he was merely weak. Salines and a few doses of aperient medicine were the only additional remedies employed.

For four years he continued well, save for his annual attack of bronchitis. All this time, however, his business anxieties went on, and he still ate meat with toothless gums.

Early in 1863, he began to have a jerk with the commencement of each inspiration (diaphragmatic); then to awake at four o'clock every morning with a sense of fright and restlessness; thoughts not under his control. Gradually this increased; he was compelled by unbearable restlessness and oppression to jump out of bed the moment he awoke, and walk about the room for an hour or more, after which he could usually get an hour or two of troubled sleep. Now his mind became enfeebled; he could not bear to hear or think about the most trifling details of business; it threw him into a state of agitation, excitement, and sense of impending death or insanity, that was terrible to his friends. Then his digestion gave way, and every meal, unless of the weakest and lightest food, gave rise in about half an hour to severe paroxysms of nervous dyspepsia. Altogether, his condition was truly wretched. Marked, and, for a time, complete relief was afforded by almost any narcotic, notably by morphia or chlorodyne, but after a few days each would lose its effect, and leave him worse than before. An ounce of gin would at most times give him a few minutes' respite. All this while his tongue was perfectly natural, save for a small triangle of yellowish fur at base at first; bowels acted regularly every day, unless confined by narcotics; skin cool; pulse full and excited at the beginning; temporals acting rather strongly; head hot; heart free from

all discoverable disease; no arcus; no albuminuria; chronic bronchitis rather worse than usual. The manifestations of the affection were thus obviously those of cerebral irritation, and, I have no doubt, the analogue or alternative of his past hemiplegia. To relieve this urgent suffering a variety of remedies were used—sedatives, narcotics, tobacco-smoking, tonics, antispasmodics, stimulants, repeated aperients, complete rest of mind and body, all practically to no purpose; finally a three-grain dose of calomel, followed by rhubarb. Sudden and complete relief followed this; but in a few days he was as bad as ever. Dr. Goolden was then called in, and expressed his opinion that the symptoms were due to a loaded colon and liver; he ordered a larger dose of calomel, to be followed by a powerful cholagogue of sulphate of manganese and sulphate of magnesia. The effect was magical; in a few hours these brought away a large quantity of very offensive fæces, and the patient experienced complete relief. This time it was permanent; he could now sleep, eat, drink, think. A set of artificial teeth and a trip to the country set him up, and to the present time (December) I have heard nothing of him.

Viewed by the light thrown on it by the second seizure, the transient hemiplegia of 1859 will obviously be seen to have been reflex. The irritation set up by a colon loaded with unhealthy fæces, and a liver loaded with unhealthy secretion, transmitted to a brain wearied and worried by long-continued anxieties, overtaken its powers (probably, through the vaso-motor nerves, altered its supply of blood), and hemiplegia followed. It would be easy, by comparing the two attacks, their history, juvantia and lædientia, to make more clear the identity of their causation, but space does not permit. In passing, one cannot help remarking the beneficence of the arrangement whereby reflex irritations of the spinal cord so often produce paraplegia, paralysis of both lateral halves of that nervous centre, while similar irritations conveyed to the brain produce usually only hemiplegia, paralysis of the functions of only half, leaving the other hemisphere to carry on life and retain intellect. It will, perhaps, be said that this form of hemiplegia is only a symptom, and not worth making so much of. In reply I would observe that no hemiplegia is more than a symptom, and that if we are habitually and sensitively alive to the fact that any doubtful case of this form of paralysis may possibly have its source in an easily removable irritation, we now and then may be able to give speedy relief to an alarming and most distressing ailment. Further, it is an important practical question, how far irritation of so delicate an organ as the brain, sufficiently active to produce an extensive palsy, may, by default of relief for an extended period, cause structural and incurable mischief. Physiology affords strong reasons for thinking such an event probable.—*London Lancet*.

THE INFLUENCE OF INTERMARRIAGE BETWEEN NATIONS UPON THE TEETH.

THE importance of the subject concerning which we propose to write the present article, is only equalled by the absolute dearth of information that exists in reference to it. The physical results of interrelations between different nationalities have long enlisted the attention of scientific men, both generally and specifically, but never in reference to the point upon which we propose to touch; and we have, therefore, a natural diffidence in approaching a subject when we may be considered as groping in the dark for the first principles.

It will, doubtless, be readily admitted by all reflecting minds that, as a rule, the teeth of the American people are possessed of less vitality, more frequently decay, and are more generally of irregular and abnormal growth, than those of any other civilized nation.

This fact cannot reasonably be attributed to climatic influences, because the Indian tribes all over the continent are noted for the beautiful condition of their teeth, their health, and regularity, while they have for generations been subjected to the same influences. Neither can it be attributed, in any great degree, to our mode of living, because in that respect we do not differ widely from other civilized nations. The question then arises, What is this prolific cause from which occur such evil and dangerous results? We desire to bring the attention of the profession to this question, with the hope of eliminating such facts as their experience may have collected having reference to it.

When we consider to what an enormous extent our population has always been made up by an aggregation of individuals from all parts of the world, intermingling so intimately by association, that blood relationships are constantly being formed with natives of every portion of the globe, we cannot but think that this condition of things must necessarily exercise a vital influence over both our physical and mental systems.

That this influence cannot be over-estimated, is proven by the peculiar characteristics resulting from an intermarriage between the negro and the white, as seen in the mulatto, whose physical capacity is so greatly depraved when compared with that of either of his progenitors; and by the same results from the union of the native Indian and white, whose "half-breed" offspring are without the physical qualifications of either.

It is, of course, well known that the conformation of the jaw differs widely in different nations. The German jaw, for example, will average one fourth wider than that of the American. Is it not reasonable to suppose that when this formation comes to be allied to one entirely different from it, the result must be what any departure from nature's laws will necessarily induce, viz., deformity or abnormal structure? For example, from the combination of the

large jaw with teeth proportioned to it, with the small jaw and small teeth, why might we not have in the next generation, perhaps, the small jaw of the one, crowded with the large teeth of the other, and *vice versâ*?

We throw out these questions for information, and we desire to have them answered. We have considered this subject seriously, and what experience we have had leads us to believe that these influences to which we have alluded are under-estimated in our consideration of the causes of decayed and irregular teeth. We trust we shall hear from the profession in reference to the hints we have thrown out, and our pages are open to anything touching them.—*New York Dental Journal*.

CULTIVATION OF LAVENDER.

BY CHARLES W. QUIN, F.C.S.

EVERY pharmacist who visited the International Exhibition of 1862 will remember the neat case of pharmaceutical preparations shown by Mr. W. Ransom, which won for him not only the well-deserved prize medal "for pharmaceutical extracts, essential oils, and dried herbs of superior quality," but, in addition, the private commendation of some of the leading pharmacists of Europe and America.

It was, therefore, with great pleasure that one day, just before the lavender harvest commenced, we accepted a long-standing invitation from this gentleman to visit his extensive farms and factories at Hitchin, in Hertfordshire. Choosing a cool day, we rattled down by the Great Northern Railway, through pleasant meadows and fertile fields of browning corn, to this quaint little old town, which lies embosomed amongst the beautifully-wooded Hertfordshire hills. The spot is particularly well situated for this description of farming; for, owing to the hilly nature of the district, the phsyic farmer has, within a small compass, many different kinds of soil at his disposal, embracing almost all the descriptions suitable to the growth of plants widely differing in their natural habitat. Arriving at the pretty little station, we find Mr. Ransom waiting to receive us. He first conducts us to his private house, which is situated on a lofty eminence overlooking a large tract of country, consisting of low wooded hills and fertile valleys. Lingering for a while to examine and admire the most magnificent fernery we have ever seen, containing upwards of 150 different species growing in the most healthy and luxuriant condition, we sally forth on our ramble, which, Mr. Ransom warns us, will be a long one; for not only are the fields themselves of great extent, but, owing to the exigencies of soil and situation, several of them are separated by large intervals. Our first visit is to a large field of lavender (*Lavendula vera*) measuring upwards of ten acres. It is in full bloom, and it

would take the pen of a Ruskin to give our readers any idea of the beauty of the sight. The long spikes of purple flowers waving backwards and forwards in the gentle wind, interspersed with the delicate greyish-green of the plants themselves, and patches of golden brown soil showing between them now and then, make up a picture worthy of the pencil of our great colorists. Mr. Ransom, however, recalls us from our reverie by telling us that he has over forty acres of this plant at present under cultivation. The lavender plant seems to thrive better on English soil than on any other. It is grown principally at Mitcham, in Surrey, and at Hitchin. At one time it was supposed that it would only come to perfection in the former locality; but during the last half century Mr. Ransom and Mr. Parks, of Hinchin, have proved that the soil and character of their farms are even still more suited to its growth. It seems to require a sandy loam, neither too stiff nor too gravelly, overlying the chalk, and measuring from eighteen inches to two feet in depth. The plant is propagated from slips cut from the old plants, which are allowed to strike out for twelve to eighteen months, during which they are carefully slipped, in order to give them a bush-like form. They are then planted out from two to three feet apart, in rows, with a space of three or four feet between them, and clipped all through the second year to strengthen them. The third year they are allowed to flower, and they continue to bear until they are seven or eight years old. The flowers, from which the oil or otto is distilled, are gathered towards the end of July or beginning of August, according to the season. The present season has not been a good one, the spikes of the flowers being only half their normal length. The English lavender, *Lavendula vera*, is indigenous to Persia, the Canaries, and the south of Europe. The reason that English oil or otto of lavender enjoys so high a reputation appears to be, that not only is the plant cultivated with the greatest care, but the otto itself is distilled by steam heat at a temperature so low as to avoid all possibility of its being contaminated with empyreumatic odors. MM. Milne Edwards and Vavasseur, in their *Manuel de Matière Médicale*, enumerate three species of lavender—*Lavendula vera*, *L. spica*, and *L. stachas*—all of which possess stimulant and tonic properties. The oil of the *Lavendula spica*, which is exclusively cultivated in France, is often offered for sale as true oil of lavender. Its odor is not nearly so pleasant, and it is only one tenth as strong as the true article. Burnett tells us that the oil of *Lavendula spica* is the more pleasant of the two. No doubt, however, Burnett means the oil of *Lavendula stachas*, or Alpine lavender, which is also a native of France, and which has an exceedingly delicious odor, but quite distinct from that of the real otto. The ancients gave the plant the name of *lavendula* from employing its flowers and leaves to aromatize their baths, and to give a sweet scent to the water in which they washed. Although pos-

sessed of stimulant and tonic properties, oil of lavender is but little used in pharmacy. Its principal use is in the manufacture of the far-famed old English perfumes—essence of lavender and lavender water. When properly made, the essence ought to consist only of the otto or oil, dissolved in rectified spirit and rose-water; but many makers add other scents, which certainly have the effect of detracting from the peculiarly refreshing character of this odor. The ordinary essence is made by dissolving the otto in rectified spirit, in the proportion of six ounces to one gallon. The best essence is distilled from a mixture of otto, four ounces; rectified spirit, five pints; rose water, one pint. The best lavender water consists of a mixture of four ounces of English oil of lavender, three quarts of rectified spirit, and one pint of rose water. The method of making the otto or oil is simple enough. The flower-spikes are put into a still, containing sufficient water; a gentle steam-heat is applied, and the watery vapor rises, carrying with it the volatile oil contained in the flower-heads. The oil is afterwards separated from the cool distillate by decantation. A small amount of essential oil is also contained in the leaves and stalks of the plant, but it is so small in quantity and inferior in quality as not to be worth the trouble of extracting. A hundred-weight of the flowers yield, by distillation, from twenty-eight to thirty-two ounces of essential oil. The lavender plant is in its prime condition when it is about four or five years old. An acre of such plants will give, in good seasons, flowers sufficient for six or seven quarts of oil.—*Chemist and Druggist.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 14, 1864.

THE PRESENT POSITION OF THE SURGEON-GENERAL.—It is now some months since the active and able Surgeon-General of the United States was politely relieved from his responsible post at Washington and sent on a tour of inspection to the Southern coast. Surprising as such a move seemed to all who were conversant with the very arduous labors of his office and the immense responsibility devolving upon him, yet being fully aware that there were matters in the Department of the Gulf which could hardly help being improved under the direct eye of the master, we could not avoid thinking that the intimations which from time to time appeared in the columns of the daily press and in the pages of unfriendly medical journals, that this tour of duty was an implied censure upon his administration, were in the main merely the expressions of private malice or professional jealousy. We were unwilling to believe that a public officer who had brought order out of such chaos, who had built up such a magnificent system of military hospitals, and had shown himself equal to their maintenance,

at the same time that the vast armies in the field were kept constantly provided with everything that it devolved on him to supply—who had so fearlessly acted up to his ideas of duty in restricting the use of certain powerful drugs which he knew had been recklessly administered to the great injury of the sick—whose whole course since he has filled the office of Surgeon-General has brought so much honor to himself and to the country—we could scarcely believe that such a man could be quietly put out of the way while charges of the gravest character against him were to be examined, without giving him the least opportunity for explanation. Recent events, however, have forced the conviction upon us that it is even so. Nevertheless, it does not appear, up to the present time, that there is the first particle of evidence against him of malfeasance in office. The gravest charge which has been brought against him seems likely to be only a malicious misconstruction of what should be regarded as evidence of his desire that nothing should be wanting for the most thorough and satisfactory provision for the medical wants of the army. He has made purchases of medical supplies, it appears, from reliable and honest dealers, at higher prices than were asked by other dealers for what were ostensibly the same things. But then the difference was, that he could rely on the good quality and genuineness of his purchases in the one case, but not in the other. Of course, it was not difficult for the disappointed speculators to cast suspicion upon this honest course of the Surgeon-General, and to intimate that he had personal reasons for giving more than the market price. Such is the charge, if we are rightly informed, to substantiate which this able officer is sent to the extremes of our territory, leaving his enemies a fair field to work in behind his back. We wait the action of the Government, but it does not yet appear that the inquiry has elicited any facts other than we have mentioned. In the mean time Dr. Hammond has been again despatched to a distant post, where he is “waiting orders,” while his important duties at Washington are left in inexperienced hands. We commend the following circular, which we find in the *New York Medical Times*, to the careful consideration of our readers. It has received the signatures of a number of the leading members of the profession in different parts of the country:—

“CIRCULAR IN BEHALF OF THE SURGEON-GENERAL.

1863.

“SIR,—Your attention is most respectfully invited to the present condition of the Medical Bureau of the War Department.

“Under the Act approved April 16th, 1862, the administration of the Medical Department was intrusted to a Surgeon-General, with the rank of a Brigadier-General. An Assistant Surgeon-General was also appointed with undefined duties, eight Medical Inspectors and a Medical Inspector-General, charged, under the direction of the Surgeon-General, with ‘the supervision of all that relates to the sanitary condition of the army, whether in transports, quarters, or camps, and of the hygiene, police, discipline, and efficiency of field and general hospitals.’

It is fair to presume that, in selecting Dr. William A. Hammond for Surgeon-General, the President and Senate were governed by good and sufficient reasons. Among those was, no doubt, the knowledge that he was a man in the prime of life, of strong constitution, and active and temperate habits; of liberal views and large and varied scientific acquirements, and of universal good repute.

“Since the first of September, however, the Surgeon-General and Inspector-General have changed places; the latter is put in charge of the Medical Bureau, uncertain what day his plans and policy may be interrupted, while the former is, ostensi-

bly at least, making long tours of inspection in the more remote fields of military operations. Under ordinary circumstances, this might be of little moment, but the present case has peculiar features.

"About the first of July, 1863, a special commission was appointed to investigate the conduct of the Medical Department. The precise objects of inquiry and nature of their instructions were not made known. It was an unfortunate circumstance that a person was placed at the head of that Commission whose relations with the Surgeon-General were known to have been unfriendly from a time when A. H. Reeder was one of Mr. Buchanan's Governors of Kansas, and certain land schemes in that unfortunate territory were exposed and thwarted by the late Senator Douglass, Gen. (then Capt.) N. Lyon and Dr. Hammond. It was naturally expected that this Commission would visit the Medical Bureau, inspect its books and records, examine the organization of the department, and inquire into its principles and rules of action; and, furnished with this outline chart, proceed to the investigation of the necessary details. This was not their course. They sedulously avoided the Surgeon-General and his office, and the most important sources of information. They visited other offices freely, where only arithmetical results were filed, and offered liberal compensation to one of the Second Auditor's clerks to furnish them with data unofficially in odd hours. The offer was promptly declined. They called for, and were furnished with, voluminous reports, filling many hundred pages with mere arithmetical figures, from which no idea could be gleaned, except what every one knew, that large supplies had been bought and much money expended. These reports might show that large quantities of a given article were bought from a particular person, but did not show that the person in question was the only one in the United States having that article for sale at the time. Vast purchases were sometimes made suddenly, and with unavoidable appearance of precipitancy. The Surgeon-General should have an opportunity to show what connection these had with the great victories of the West, the Peninsular campaign, the retreat of General Pope, or the battle of Antietam. So far as expenditure of money is concerned, the most extravagant and irregular disbursements are constantly and necessarily made under authority of commanding generals after great battles. Such outlay has always been sustained by the Secretary of War, and the wisdom and justness of his decision we do not question. But the Commission asked for no explanations, and repeatedly refused to listen to them when offered. In their secret sessions at Washington, and their visits to other cities, they no doubt found enough of disappointed speculators to fill their willing ears with tales of their own wrongs, and the frauds of rival dealers. What may be the judgment of this Commission, after a session of five months, it is only permitted us to guess, but there is no reason to expect that it will be favorable. Already a portion of the public press, every ready to bay from afar at the bark of a prominent man, is attempting to prejudice the public mind by circulating vague defamation.

"In the midst of these investigations, as if to prevent the possibility of interference or explanation, the Surgeon-General was despatched to the South Atlantic and Gulf Coasts, the Mississippi River, and the Cumberland, ostensibly to perform those duties for the sake of which the office of Medical Inspector-General had been created. Surgeon Joseph R. Smith, who had been for thirteen months his principal aid, and was presumed to be familiar with all his official acts, was banished to Little Rock, that he might not give testimony in his favor.

"The administration of Dr. Hammond fell in a period of great events and arduous labor. The armies under Gen. McClellan and Gen. Pope claimed a large share of his attention, and often his actual presence, while permission to visit the field of Western operations was denied him. The whole medical service of the United States forces had to be reorganized. The extensive hospitals throughout the entire field of military operations, of which those on the Chesapeake, at Washington, Annapolis, Philadelphia, and New York, may be taken as examples, were to be planned, built, organized, and supplied. Large purchases had to be made on the shortest possible notice, under circumstances which made the promptness of supply as important as the character of the vendor. Be it also remembered that he was oftentimes straightened for funds, and several times without a dol-

lar at his command. For, however liberally Congress might appropriate money, none of it was at his immediate disposal. It could only be reached by a complex system of requisitions, liable to be blocked and delayed at every step. Hence, he might sometimes be compelled to order purchases at a disadvantage. That in such a state of things, men would occasionally arise, base enough to attempt to defraud the nation in the quality or the price of their wares, was to be expected—that they sometimes succeeded, is not improbable, although not proved. But this proves neither incompetency nor corruption in General Hammond. On his appointment, he found all the mechanism of supply adapted to a peace establishment. Time and leisure were necessary to learn all its details, and discover its defects. Of those cases at which rumor now mostly points, some were coeval with the war, some were inevitable under existing laws, and others were instantly discovered and corrected by General Hammond. Should the records and correspondence of the Surgeon-General's office at Washington ever be examined, it will be found that vigilance and impartiality presided there. It is known that the most stringent orders were issued to Medical Purveyors in regard to the standing and integrity of the persons with whom they dealt, and the quality and prices of supplies. Complaints were met by investigations, and, if found just, with quick and decisive remedies. When, in the fall of 1862, malversation was reported in the Purveying depot at Philadelphia, the Inspector-General, and subsequently Medical Inspector Coolidge, were sent with ample powers and instructions to investigate the whole subject of the purchase and issue of supplies. Other investigations were had from time to time as occasions arose.

“The orders and reports in these cases are authentic documents for the conduct of the Department. There are numerous instances where positive orders were given not to buy of particular houses, whose prices, or the quality or measure of whose goods was found objectionable; none will be found where patronage was restricted to favorite parties. But in these expositions of errors and frauds by the Surgeon-General, and the chagrin of unsuccessful competition, a multitude of enemies were made, but too eager to testify before any tribunal. Great importance is attached to this element of disaffection, in accounting for the present state of affairs, and almost as much to a feeling of jealousy among some of the old officers of the regular service. It is not to be wondered at, that some of the latter, accustomed to regard length of past service more than present efficiency as constituting the only title to promotion, should feel hurt at seeing a man selected for knowledge of military hygiene, and not past the meridian of life, promoted over their heads, and should therefore endeavor to spread their disaffection like a contagion. It is fully believed that in this way false representations have been made to the Secretary of War, which have pre-occupied his mind with an erroneous impression of the facts.

“What is proposed, then, is very simple. If Dr. Hammond has not forfeited his right to fill the position for which he had been selected by the President of the United States, he should be reinstated immediately. If, on the other hand, his honesty or competency is questioned, it is due to the President, the Senate, and the People, that this should be made known by the results of a formal procedure, and not from an investigation conducted by a secret, *ex parte*, and anonymous commission. Let the accused have the same hearing as his accusers. Let the examination be as severe and searching as you please, so that it is but fair and open.

“Your co-operation, Sir, is respectfully solicited in obtaining this measure of justice. Be the decision what it may, all good men will then accept it without a murmur; and none with a better grace than the Surgeon-General himself. It is important that justice be done to General Hammond; but it is immeasurably more important that the habit of justice be maintained among the American people.

“Believing that Surgeon-General Hammond has administered the complicated affairs of the Medical Bureau with a degree of honesty, scientific ability and success, that should challenge the admiration of Congress, the people, and the medical profession of this and foreign countries, we desire to infuse into our appeal every principle which should actuate those who heartily wish to see a just record

made, not only of our National military successes, but of the triumphs in military hygiene, and the highest forms of pure philanthropy."

(SIGNED)

Since the above was in print, we see by the public papers that the President has ordered a court-martial upon the Surgeon-General. His friends can ask nothing more than this. We await the result with entire confidence that he will be honorably acquitted from the charges that have been brought against him.

DEATH OF DR. JOHN C. DALTON.—It is our melancholy duty to announce this week the death of an honored member of the profession of this city, Dr. John C. Dalton, at the mature age of 68. This sad event took place on Friday, the 8th inst., after a week of severe suffering. The primary cause of his death, as appeared at the autopsy, was rupture of the left kidney, produced by a fall on the ice, on the 2d inst. Severe symptoms came on in a few hours, which only yielded to the persistent administration of sulphuric ether for twenty four hours. His condition then became more promising, but double pneumonia supervened and brought a sudden close to his useful and honorable career. We know we express the feeling of all who knew Dr. Dalton, that his death comes very near to an unusual number of hearts. His kindly, genial nature warmed and charmed all that were once brought within its influence. Advancing years had not chilled, but seemed rather to have expanded the generous outflow of his sympathies. The qualities of his mind were as engaging and attractive as the gentleness of his heart, and made him a most welcome companion to all. He was a signal example of the highest type of the medical profession—a representative of all its purest and noblest qualities. Want of space compels us to defer to another week the fuller notice of our deceased friend, which we are prompted to give, as well as a friendly communication from a professional brother.

BOSTON PHYSICIANS AND THE AMBULANCE SYSTEM.—We find the following paragraph in the *American Medical Times* of the 2d inst. :—

"There are several gentlemen from Boston now in Washington to urge upon the Government the adoption of a uniform ambulance system. Their object is an excellent one, but they are a little too much disposed to push their own ideas to the rather uncourteous neglect of the at least equally intelligent convictions of others, and thus tend to diminish the weight of the influence of the profession with Government. Now, the organization of the ambulance system for the Army of the Potomac by Dr. Letterman, its Medical Director, promulgated and inaugurated in General Order No. 85, August 25th, 1863, by Gen. Meade, is the best and only practical organization feasible; it has been thoroughly studied out and tried under the advice of the Surgeon-General and the Sanitary Commission, and all that is now wanted is to secure its adoption at Headquarters at Washington for the whole military force of the United States."

We regret to have to say that the first part of this statement is entirely incorrect. None of the medical gentlemen of Boston who have been active in urging the establishment of an ambulance system, have been recently or are now in Washington for this purpose. So far as we learn—and we have conversed with some who have been most active in forwarding this movement—the plan of Gen. Meade meets with their most cordial approval. We took occasion ourselves to commend it most heartily a few weeks since, and published an abstract

of it. Our cotemporary does Boston, which may claim the credit of originating this benevolent enterprise, great injustice in the above statements.

THE buildings erected in Philadelphia, in 1853, for the Pennsylvania Medical College, at a cost of between fifty and sixty thousand dollars, have lately been sold to the Eclectic Medical College of that city. The withdrawal of Southern students at the commencement of the rebellion was the cause of the extinction of the first-named College.

The number of deaths in San Francisco, Cal., during the month of October, was 236, being the largest monthly mortality ever recorded in that city. Only 18 of this number are reported as being caused by consumption.

A convention of the dentists in the towns and cities of the Merrimac Valley, held at Lowell in October last, resulted in the formation of a society under the name of the *Merrimac Valley Dental Association*. A constitution was adopted, and officers for the current year were elected. Dr. A. Lawrence, of Lowell, is President; and Drs. D. K. Boutelle, of Manchester, N. H., S. H. Elliott, of Haverhill, Mass., and E. G. Cummings, of Concord, N. H., are Vice Presidents. The next meeting takes place in Lowell in May next.

Prof. M. K. Taylor, of the Medical Department of the Iowa State University, recommends, in the *Chicago Medical Examiner*, the external use of ice in the treatment of affections of the throat. He states that he has used it to great advantage in inflammatory and spasmodic croup, diphtheria, tonsillitis, laryngitis and œdema of the glottis. The ice is applied over the larynx, a piece as large as a hen's egg at a time, in a single thickness of oiled silk, with several thicknesses of flannel over it and around the whole neck.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 9th, 1864.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	64	59	123
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.5	37.8	79.3
Average corrected to increased population	00	00	86.77
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Diphtheria.
19	9	3	16	0	1	2	3

COMMUNICATIONS RECEIVED.—The paper by Dr. V. W. Blanchard, of Vermont, is received, and will appear next week.

MARRIED.—At Woburn, 7th inst., Samuel Warren Abbott, M.D., Surgeon of the U. S. gunboat Catskill, to Miss Martha W. Sullivan.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 9th, 123. Males, 64—Females, 59.—Accident, 3—apoplexy, 2—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 6—inflammation of the brain, 2—bronchitis, 2—cancer, 1—consumption, 19—convulsions, 5—croup, 9—cyanosis, 1—cystitis, 1—debility, 3—diarrhoea, 2—diphtheria, 3—dropsy, 2—dropsy of the brain, 4—dysentery, 1—scarlet fever, 3—typhoid fever, 2—disease of the heart, 2—infantile disease, 5—intemperance, 2—rupture of intestines, 1—disease of the kidneys, 1—lock-jaw, 1—congestion of the lungs, 1—inflammation of the lungs, 16—marasmus, 3—old age, 4—paralysis, 1—scalded, 2—srofula, 1—unknown, 6—wounds received in battle, 1.

Under 5 years of age, 46—between 5 and 20 years, 11—between 20 and 40 years, 19—between 40 and 60 years, 26—above 60 years, 21. Born in the United States, 89—Ireland, 27—other places, 7.

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THURSDAY, JANUARY 21, 1864.

No. 25.

ARSENICAL PAPER HANGINGS.

[Read before the Boston Society for Medical Observation, Jan. 4th, 1864, and communicated for the Boston Medical and Surgical Journal.]

BY JOHN BACON, M.D., OF BOSTON.

FOR some years past, attention has been occasionally directed to the poisonous action of the green arsenical pigments used to color paper hangings, and many cases of severe and even fatal illness originating from this cause may be found recorded in recent volumes of the medical journals. It is desirable that physicians should become more fully aware of the extent to which arsenical colors are spread on the walls of dwelling houses; and of the liability to chronic poisoning from inhaling the fine dust detached from the paper and diffused through the air of apartments thus decorated. Having been called upon lately to analyze for arsenic several suspected wall papers, it occurred to me to exhibit to the Boston Society for Medical Observation some characteristic specimens, showing the various coloring matters by which different shades of green are produced; and to present, briefly, the results of my analyses of French, English and American paper hangings within a few years, looking at the subject in its chemical relations chiefly.

The arsenical pigments used to give the green tints on wall paper, are arsenite of copper, or Scheele's green, which has long been known; and aceto-arsenite of copper, called Schweinfurth green, or Emerald green. The latter is of more recent introduction, and is preferred to Scheele's green for the greater brilliancy of its color. It is a definite compound of acetate and arsenite of copper, and not a mere mixture. Arsenic is a large ingredient in both these pigments; Scheele's green containing 55 per cent. of arsenious acid, and emerald green over 58 per cent.

These colors are employed on paper hangings of all qualities, from the most costly to the cheapest. Some of the plain green wall papers are covered by a thick coating of the pigment. In others, the ground only is an arsenical color; and in some, a little green foliage alone occurs. Frequently, so much as fifty or sixty

grains of the arsenical pigment is spread on each square foot of the paper. Emerald green mixed with whiting or other white pigments gives very delicate tints of pale green. On some papers, the ground is a thick coat of loosely adhering color, which appears faintly greenish to the eye; but analysis proves it to be rich in arsenic.

Great differences exist in the adhesion of the pigment, according to the amount of size mixed with it, and the mode of its application to the paper. The so-called glazed papers, on which a smooth and polished surface is produced by strong pressure, have usually no covering over the pigment, but the coloring matter adheres firmly and is not readily detached by friction, until by long wear the smooth surface is broken. From the glazed papers there is every gradation to those from which the slightest friction, or even a current of air, removes portions of the color. The foliage on some of the more expensive wall papers has a delicate bloom given by loosely attached emerald green.

Arsenic has been repeatedly detected in the dust of apartments hung with green-colored papers; sometimes enough pigment is present to give the dust a green tint. Various causes loosen the color from the paper and disseminate it as an impalpable powder through the air of the room. An atmosphere so contaminated must act injuriously on the health of those breathing it, although the great majority of the persons exposed may experience no immediate and obvious ill effects. It is not probable that in any ordinary circumstances the pigment while on the paper can undergo decomposition so as to set free arseniuretted hydrogen or any volatile compound of arsenic. In rooms where the walls are always dry, a thin covering of varnish, to prevent mechanical detachment of the coloring matter, would seem to afford full security; still, it is better to remove every suspicion of danger by substituting non-arsenical papers.

Paper hangings are colored by other greens besides those containing arsenic, though somewhat inferior in beauty and liveliness of tint. The very dark shades are mostly chrome greens, composed of yellow chromate of lead with Prussian blue. A bright color can be obtained from chrome green alone, but arsenical pigment is frequently mixed with it. I have analyzed recently several papers thus colored; such mixtures seem to be more commonly employed than formerly. Some tolerably dark greens contain a large proportion of arsenical color combined with chrome green or with Prussian blue only.

The green flock of flock papers is made from shreds of woollen cloth dyed by vegetable colors and ground to powder. This is attached to the paper by some species of size. The more costly dark-green wall papers are of this kind, and the ground upon which the flock is laid is sometimes an arsenical pigment. Particles of the dyed flock are easily detached from such papers, and may always be found in the dust of the apartment. In the better qualities of

borders for wall papers, dyed flock, free from arsenic, is generally used; but emerald green or Scheele's green is often laid over it, to form raised figures of different shades of green.

It is generally easy to ascertain the presence of arsenic in the green colors by simple chemical tests, which the physician can apply. The readiest mode is to place a slip of the suspected paper, or pigment scraped from its surface, in a watch-glass or white saucer, with a little aqua ammoniæ. This dissolves the arsenical coloring matter and forms a blue solution, owing to the presence of copper. A few drops of a solution of nitrate of silver added to the blue liquid, or a stick of lunar caustic dipped into it, will now give the characteristic lemon-yellow precipitate of arsenite of silver. The one point requiring attention is to avoid excess of ammonia, which prevents the formation of a precipitate. When the quantity of pigment is small, it is advisable to dilute the aqua ammoniæ somewhat. The blue color of the ammoniacal solution is not a sufficient evidence of the presence of arsenite of copper; because other compounds of copper, partially soluble in ammonia, as green and blue verditer, are occasionally used on paper hangings. If an additional test is desired, a little pigment scraped from the paper, and laid on a piece of burning charcoal, will give the peculiar garlic odor of arsenic. Much size or other organic matter mixed with the pigment may produce empyreumatic odors capable of concealing the garlic odor, or even resembling it. This test may be useful as a corroborative one, but is not by itself reliable.

Papers colored by chrome green are recognized by dipping them into muriatic acid, diluted by three or four measures of water. Chromate of lead is quickly dissolved, leaving Prussian blue; and the paper assumes a bright blue color. On adding a small excess of aqua ammoniæ to the acid solution from a paper colored by chrome green alone, yellow chromate of lead is precipitated. If emerald green or Scheele's green is mixed with the chrome green, the muriatic acid dissolves it, and its presence is likely to be overlooked, unless the paper is previously treated by ammonia, which attacks only the arsenical pigments. Either hydrochloric acid or aqua ammoniæ removes Scheele's green and emerald green completely from papers colored by them alone, and restores the original color of the paper.

DIPHTHERITIS—A NEW PLAN OF TREATMENT.

BY VIRGIL W. BLANCHARD, M.D., BRIDPORT, VT.

[Communicated for the Boston Medical and Surgical Journal.]

I do not claim that I have discovered an infallible remedy for diphtheritic disease; yet I do affirm that the plan of treatment that I shall propose in the following article has proved in my hands far

more successful as a therapeutic agent in its treatment than the "tonic course" that constitutes at present the popular remedy. In fact, since I adopted the plan of treatment advised in this article, my practice in diphtheritic disease has not been attended with a single fatal result, although it has been applied to some of the most severe cases that I have met with. Previously, while I pursued the usual "tonic course" of treatment, it was attended with the frightful mortality of 75 per cent. of the number of cases treated.

To enter at this time into an exhaustive discussion of the cause, nature and treatment of diphtheritic disease would make an article too cumbersome for the pages of your JOURNAL. To those interested in my plan of treatment I would say, that a volume embodying my views in full upon the subject will soon be issued. I will content myself at this time with giving a brief outline of my theory of diphtheritic disease and my plan of treating it. I would remark, however, that the proportions and symmetry of the theory will signally suffer in consequence of the brevity that I shall be obliged to use.

The remote or pre-germinal cause of diphtheritic disease I conceive to be a morbid condition of the circulating fluids of the body. This condition is probably produced by an obscure miasmatic atmosphere. The structure that becomes essentially the seat of the disease I believe to be the sympathetic nervous system. The portions of this system that are the most directly concerned in its manifestations are, I believe, the spheno-palatine or Meckel's ganglia. These ganglia, it will be recollected, distribute nerves that govern the functions of nutrition and secretion in the mucous surface lining the nasal passages, fauces and pharynx. The procatactic or exciting cause may be a common sore throat, or any cause that is in itself an irritant to the mucous membrane lining the nasal passages and throat. Through this irritation a morbid impression additional to the one produced by the diphtheritic poison circulating with the blood, is made through their afferent nerves upon the spheno-palatine or Meckel's ganglia, the two morbid impressions concurring to light up in the mucous tissue to which they distribute their nerves an exaggerated function of nutrition and secretion, the fruit of which is the characteristic deposit. That the ganglia of the sympathetic nervous system are independent of each other in the elaboration and transmission of nervous fluid, is an established physiological fact. It is also highly probable that when a single ganglion is stimulated or excited from any cause, it has the power of diverting from the rest belonging to the same system, and especially from those adjacent, the *spiritus vitalis* or their own proper secretions; diminishing, thereby, the functions of nutrition and secretion in those tissues they supply with nerves, while the same functions are exalted in those tissues that are supplied by the nerves of the dominant ganglion.

My theory of diphtheritic disease then, is, that the sphenopalatine or Meckel's ganglia, under the influence of morbid excitement, appropriate to themselves more than their proportion of the nervous fluid of the nervous system to which they belong, by the aid of which they are enabled to carry on a morbidly exaggerated function of nutrition and secretion in the tissue to which they distribute nerves. The morbid excitation is produced by two causes—one the general, the other the local. The general one I term the remote or pre-germinal; the local one, the exciting or procataretic cause.

While this morbid excitement is present in the sphenopalatine or Meckel's ganglia, there is a diminished function of nutrition and secretion, from a lack of the normal supply of nervous fluid, in all the tissues of the body except those that are supplied by the nerves from these ganglia. This explains the diminished action in all of the important secretory organs of the body which characterizes a severe case of diphtheritic disease. To this obstruction of the secretory process may probably be ascribed the rapid deterioration of the blood that doubtless takes place in consequence of the failure of the appropriate glands to eliminate from it the poisonous qualities which it contains. The partiality of diphtheritic inflammation for the mucous surface lining the nasal passages and throat, is also explained by the fact that these tracts are more exposed than the rest within the body to the effects of irritating agencies. Thus it will be seen that the mucous surface lining the nasal passages and throat is the only one within the body that is exposed in any considerable degree to the exciting cause of the disease. A blistered or excoriated surface upon the periphery of the body becomes, from the same cause, a procataretic agent, that may involve the nervous centre from which it receives its nerves of nutrition and secretion.

In the treatment of diphtheritic disease it is my aim to cut off communication in the sympathetic nervous system between its ganglia belonging to the trunk, and those belonging to the cranium. I effect this by applying a sedative agent to the site of the superior cervical ganglia. The sedative agent must be of such degree of power as to deprive, completely or in part, the nervous centres beneath it of the power of elaborating and transmitting the *spiritus vitalis*. The sphenopalatine or Meckel's ganglia being thus in a state of partial or complete isolation, will no longer be enabled to divert, from the ganglia belonging to the trunk, their normal secretion of nervous fluid, by the aid of which they are enabled in diphtheritic disease to produce a monstrosity in nutrition and secretion. In addition to this, I apply a stimulating agent to the site of the ganglia of the trunk situated in the dorsal and lumbar regions. This is done to increase the secretion of the nervous fluid in those ganglia, which is no longer diverted from its proper channels, in order to re-establish as soon and as completely as possible the functions

of nutrition and secretion in the important secretory glands to which they distribute nerves. I also administer internally, iron in combination with nux vomica or its active principle strychnine, usually the combination known as the citrate of iron and strychnine. The iron supplies the blood with hæmatosin, which in the course of the disease is rapidly destroyed. The strychnia acts as a stimulant and tonic to the spinal cord. Such an action produced upon its tissue will probably produce the effect of counter-irritation upon that portion of its own system contained within the cranium. From such an effect, through the channels of communication that connect this portion with the sympathetic nervous system of the same region, there may be produced upon the sphenopalatine or Meckel's ganglia a similar though less decided result. I sometimes prescribe internally a mild diuretic, and always as nutritious a diet of animal food (usually broths) as the patient will accept. Diffusible stimulus, quinine, and all agents, except iron, that have a tendency to excite the cerebral functions, for obvious reasons I avoid.

My course of treatment, it will be seen, has not in view the elimination of the diphtheritic poison from the blood by the aid of neutralizing agents, but the restoration and stimulation of the functions of nutrition and secretion, from the tonic and curative action of which, it will rapidly disappear through the natural emunctories of the body. The *modus operandi*, with my plan of treatment, is as follows:—I apply ice, and in some cases a more refrigerant agent, to the site of the superior cervical ganglia of the sympathetic nervous system, or to a surface (in a child) about two inches square upon each side of the spine, about once inch below the occipital bone. At the same time I apply heat, either by the application of hot water contained in Indian rubber bags, or by napkins wrung out of hot water, to the site of the ganglia in the dorsal and lumbar regions, or to each side of the spine below the shoulders, its entire length. The applications of the refrigerating agent and of the heat *must be constant*, and the degree of each must depend upon the type of the disease. Internally, I administer the citrate of iron and strychnia, as already mentioned, sometimes combined with a mild diuretic. When the secretion of the skin is excessively deficient, I have used with advantage the nitro-muriatic acid bath.

The following case of diphtheritic disease is the last severe one that I have treated according to the above plan. I copy it *verbatim* from my record.

Bridport, Dec. 9th, 1863. Ten o'clock, P.M. Called to see a daughter of Mr. Rinaldo Kingsland. Disease, diphtheria; duration of same, 28 hours. Age of patient, 8 years. Pulse 175 per minute, very soft and irregular. Skin very hot and dry. Secretion of kidneys deficient, no urine having passed for ten hours. Respiration much oppressed and hurried; deglutition extremely difficult; the fauces and pharynx heavily loaded with a brownish deposit;

cough very croupy; nostrils discharging an amber-colored excoriating secretion; the breath horribly foetid; the neck, in the parotid and sub-maxillary regions, badly swollen; the forehead and nasal regions pinched, the eyelids œdematous, and the cheeks puffed and shining. A physician was called in at 10 o'clock, who prescribed a tonic and diuretic, the patient rapidly growing worse under the effect. Prescribed ice for the back and neck, and napkins wrung out of hot water for each side of the spine below the shoulders; internally, two grains of citrate of iron, in combination with one twenty-fourth of a grain of strychnia, together with five drops of sweet spirits of nitre once in three hours.

Dec. 9th, 11 o'clock, P.M.—Respiration less hurried; pulse 160 per minute. Patient complains that the ice is not cold enough—that it is getting warm.

Dec. 10th, 9 o'clock, A.M.—Respiration much improved; pulse 130 per minute, and improved in tone; deglutition less difficult. Gave the patient some animal broth; same treatment. At 4 o'clock, P.M., patient was more comfortable. Pulse 120 per minute, and decidedly improved in tone; respiration free, and but little hurried; breath less foetid; discharge from the nostrils less, and not so excoriating; skin moist; secretion of the kidneys increased. The patient takes broth freely, and remarks that the application of heat and cold to the region of the spine feels grateful. Same treatment.

Dec. 11th, 10 o'clock, A.M.—Pulse 120, improving in tone; respiration natural; breath less foetid; urine more plentiful; countenance assuming a natural expression. Same treatment.

Dec. 12th.—Patient improving. Pulse 110, quite firm; resolution of the swelling in the neck taking place, the deposit becoming detached from the mucous surface of the throat; discharge from the nostrils ceased; breath but little tainted. The patient takes solid animal food, besides the broth. Same treatment.

Dec. 13th.—Patient better; strength and appetite improving; the deposit becoming rapidly detached; the breath sweet; the secretions of the skin and kidneys normal. Same treatment.

Dec. 14th.—All the symptoms better. Patient complains that the ice and heat applied to the spinal region feel disagreeable; discontinue their application, but give the dose of my former prescription once in six hours.

Dec. 16th.—Patient sitting up, and improving rapidly.

Dec. 18th.—Patient gaining rapidly in strength.

Dec. 20th.—Patient enjoying an excellent appetite, and able to sit up most of the time. Discontinue the iron and strychnia.

Dec. 25th, 1863.

IMPROVED METHODS OF TREATMENT IN DEFORMITIES.

By E. ANDREWS, A.M., M.D., PROFESSOR OF SURGERY IN CHICAGO MED. COLLEGE.

IN previous articles, I have figured and described several pieces of apparatus, which I use for the cure of spinal curvatures. There are numerous other appliances which are valuable adjuvants to the main treatment, among the most important of which is what the German surgeons call the "stretch-bed." This machine consists of a couch, with various appliances at the head and foot for making extension and counter-extension upon the spinal column; by means of which, like a string put under tension, the curves of the spinal column are drawn gradually straight. The first successes obtained by this invention created quite a furor in its favor in Europe; and its popularity was such as to occasion the satire, that "many seemed to imagine that nothing more was necessary to constitute an orthopedic surgeon than a stretch-bed and patients."

The extending power in this machine consists of springs or weights and pulleys, applied both at the head and foot of the bed, the weights being preferable. The upper extenders were applied to the head, in case of high curvature, and to the shoulders when the difficulty was lower down. The lower extension was applied to the bulge of the hips or to the feet. The patient was not usually required to remain continuously in the machine, but was placed in it, at intervals, from two to four times a-day; but the more time he could spend in it, without injurious loss of exercise, the more rapid was his improvement.

Although the extravagant admiration at first felt for the stretch-bed has greatly subsided, it still remains as a very valuable instrument, which no one undertaking the treatment of spinal curvatures can afford to do without. It may be specially and elaborately constructed for hospital purposes, or be extemporized out of an ordinary bedstead in private practice. For hospital purposes, the bedstead may be made of wood or iron. It should be not less than eight feet in length, by three and a half in breadth. The great length is required to make space above the head and below the feet for elastic straps and other extending appliances. There should be no head- nor foot-board, but instead of them a long roller of wood, three inches in diameter, extending from post to post, across the head and foot of the machine, and turning easily on iron axles. Above each roller should be a strong cross-bar of wood, into which iron pulleys may be set in various positions, as the surgeon may from time to time desire. The mattress should be of curled hair, rather hard, and made level and smooth. Pillows and bolsters can be varied according to the necessities of the case.

For temporary use, in private practice, a stretch-bed may be improvised out of the ordinary bedstead, by cutting openings through

the head- and foot-boards, and setting in some small cast-iron or brass pulleys, such as may be found in any hardware store.

If the deformity is in the upper portion of the spine, an extension is attached to the head, by means of a firm leather band, moulded to the occiput, and provided with two branch straps, one to cross the forehead and the other to pass under the point of the chin. This must be very carefully constructed, or else it will be too irksome to be borne, but when well fitted it is borne without pain. A short band passes upward from each side of the head, and attaches to a cord which is passed over the pulley and supports a weight. The counter-extension is made by a cord and weight at the foot of the bed, in a similar manner, and may be attached to the patient either by adhesive straps applied to the legs, or by a strong waist buckled around the bulge of the hips. The weight should vary from five pounds upward, according to the ability of the patient to tolerate it. If this apparatus is properly constructed and applied, the patient will enjoy free motion both of upper and lower extremities, and can turn on his back, his face, or either side, without interfering with the extension, or rising from the bed. No effort should be made to keep the patient continually on the stretch-bed, except in cases where he is unable to sit or walk. He should resort to the bed from two to four times a-day, and remain from half an hour to an hour and a half each time. The remainder of the time he should either wear a proper supporter, or be occupied by gymnastic exercises calculated to correct the deformity. Some patients will be able to sleep in the stretch-bed after a little practice. In these cases they should by all means do so, as it adds the whole of the sleeping hours to the treatment, and very much hastens recovery. If the deformity is below the sixth dorsal vertebra, the upper extension should be applied to the armpits and chest by proper pads in the axilla, and by broad adhesive straps upon the back and chest, attached to the extending cord. When properly used, the stretch-bed exerts a very powerful influence in unfolding spinal curvatures, and the worse the deformity the more striking are its results. One of the most prominent symptoms of improvement is the surprising increase of stature which the patient exhibits as the spinal column comes out to a correct line.

Gymnastics.—The cure of some forms of curvature of the spine, and of all anchylosed joints, is greatly promoted, and may be entirely accomplished, by proper specific exercises, either active or passive. It is almost impossible to introduce this part of the treatment fully into general practice, on account of the amount of time required to be spent with the patient, either by the surgeon, or by a trained assistant, but parts of it will be found useful to every practitioner. The exercises are active and passive, the former being executed by the patient's own muscles, and the latter by the hand of the surgeon. Thus, for instance, if the patient

has a slight double lateral curvature, and he be directed to elevate the shoulder on the side of the concavity of the upper curve (usually the left), and depress the opposite one, and to curve the spine in the direction opposite the deformity, the practitioner at the same time guiding and assisting the motion with the hands, it will be found that the spine is momentarily restored to its normal shape. If she now repeat these motions with the same assistance many times, until fatigued, every day, the muscles which are thus trained will acquire a prodigious development, and their antagonists remaining undeveloped, they gain the mastery, and by their own superior tension ultimately correct the deformity. The bones and ligaments yield slowly to the pressure, until their shapes are perfectly restored. This is the principle of Ling's Swedish "Movement Cure," which, in a debased and spoiled form, is now hawked about the country, by sundry quacks. Some additional exercises are performed in most cases. Thus a cushioned post is prepared, and set firmly in the floor, across the top of which the patient is made to lean, and by repeated efforts of the surgeon, is made many times in succession to flex the curved spine, in the direction opposite that of the deformity.

Anchylosed joints are treated by constantly repeated exercises, both active and passive, until by degrees the fibrous bands are elongated, and mobility established. A vast number of other exercises have been devised by various orthopedists, some of which are useful and some not, but the principles involved are the same throughout.

State of Orthopedic Surgery in Europe.—Dr. Ling, of Stockholm, was one of the earliest lights in orthopedy. His system of treatment consisted mainly in the series of gymnastic exercises alluded to above. He gave a strong impetus to the treatment of deformities; and his institute was under the patronage of the government for forty years. Sundry rags and tatters of his ideas, under the name of the "Swedish Movement Cure," constitute the stock in trade of numerous American quacks.

Wildberger, of the Orthopedic Institute in Bamberg, mostly discards Ling's gymnastics as useless, because they are very unsuccessful in spinal diseases. This is, in a great measure, true, Ling's exercises being better adapted to diseases of the extremities than of the spine. Wildberger, on the contrary, gives most of his attention to spinal deformities, and treats them mainly by a variety of splints and supporters, which slowly and steadily force the curvatures back to a straight line. His apparatus is thorough and efficient in its action, and has the merit of allowing the patient to walk about and exercise while it is worn; but most of it is complex and clumsy in structure, being in striking contrast, in that respect, with American instruments.

Dr. Melicher, of Vienna, has an orthopedic institute, in which

he does, or at least did, a few years ago, rely almost exclusively upon Ling's gymnastics.

Dr. Berend, of Berlin, has an establishment in which he treats his patients by tenotomy, or other surgical operation, when required, and by the stretch-bed and other machinery, after which he completes the cures by gymnastics alone.

Dr. Schreiber, of the Leipsic Orthopedic Institute, treats his patients upon a stretch-bed, of which the extending force is produced by steel springs. The bed is also provided with lateral steel springs, to press in the convexities of the curved spines. His institute is but little patronized.

Dr. Kjøelstadt, of Norway, has a complex system something like the following. He first places his patient upon a stretch-bed, during certain hours. Then taking him up, he places him in a peculiar machine, in which he marches him with short steps around the room. Then laying him down, he kneads the joints and muscles with his fists, and then returns him to the stretch-bed again. He is said to possess very little adaptive power, treating all kinds of cases alike.

Dr. Roth, of London, has an institute, in which he follows Ling's method, combined with the Russian bath—that is, a bath having a series of sudden alternations between hot and cold water.

Dr. Nitzsche, of Dresden, takes complete possession of his patients, occupying their whole time with curative measures, making extensive use of gymnastics and electricity. Spinal curvatures go through the following course:—In the morning, he first washes the patient's back with cold water; then laying him on his face, he rubs him down with alcohol, and proceeds to knead and press the back in a systematic manner. He then practises the sufferer on motions to straighten the spine by the action of his own muscles. Next comes a series of exercises in which the spine is stretched between rollers, and the patient is made to swing by his hands, head, &c. &c. All this is the morning lesson. In the afternoon it is repeated, and the evening is occupied with gymnastics; after which his patients are said to sleep well. If they are not cured, it certainly is not for want of diligence.

Dr. Klepsch, of the Breslau Institute, uses stretch-beds, electricity, and a variety of instruments for club-feet and other deformities.

Dr. Knorr, of Munich, takes substantially the same course, adding to it, however, a system of gymnastics and of water cure.

Dr. Parrow, of the Orthopedic Institute, in Bonn, has a kind of chair constructed for straightening the spine. He also makes use of a great variety of apparatus, among which are pulleys, springs, and sundry handles pendant from the ceiling, upon which the patient practises swinging by one or both hands, as the case requires.

Drs. Ebener and Grossman, of Stutgard, regard instruments as

indispensable, employing stretch-beds, corsets, supporters, &c., and adding also active and passive gymnastics.

Prof. Werner, of the Gymnastic Academy, of Dessau, employs corsets, supporters, stretch-beds and baths, together with active gymnastics, but condemns the passive gymnastics as useless. In this, however, he is certainly in error, as the passive movements are very often the only ones which are possible at the commencement of the treatment.

State of Orthopedic Surgery in the United States.—In this country, the cure of deformities is an almost completely neglected art. A few good men are zealously cultivating it in the larger Eastern cities; but in the West, it has only just begun to receive attention. For this reason, the whole country is filled with neglected spinal curvatures, bent knees, uncured club-feet and anchylosed elbows. Many of these cases are perfectly curable, even when of many years' standing, and should be at once taken in hand. The cases of spinal deformity are especially to be commiserated, because they are usually taught to look upon their state as hopeless; whereas, a large portion of them are capable of being restored to soundness and perfect form. It is the hope of the writer that these articles may arouse the attention of our surgeons to their duty; and prevent these cases from being turned over to the maltreatment of lying, itinerant quacks.—*Chicago Medical Examiner.*

ON THE USE OF TANNIN IN INFLAMMATORY AFFECTIONS OF THE CONJUNCTIVA.

BY G. R. SHERATON, L.R.C.P.E., M.R.C.S.

In consequence of the great discrepancy of opinion that seems to exist respecting the relative value of local and general treatment of ophthalmia, each of which has been extolled and variously estimated from time to time, I submit to the consideration of my professional brethren the result of my experience in this class of disorders, in which I shall attempt to show the vast superiority of the local over the antiphlogistic treatment, of the value of astringents generally, and of tannin in particular. But in the treatment of this, as in that of other diseases, there must necessarily be considerable modification made dependent upon its cause, for if arising from constitutional causes, that state of constitution must be remedied, whilst the local treatment is merely palliative and of secondary import; but local affections dependent upon local causes obviously require local treatment. Inflammatory affections of the "conjunctiva" usually belong to the latter class. Nowhere do we find the inflammatory process so admirably shown, or the effect of remedies so easily and accurately observed; the slightest change in the congested membrane towards resolution, or increased congestion, the most casual observer cannot fail to perceive.

How frequently have we seen the antiphlogistic treatment persevered in till the system has been drained of its blood, without producing the least beneficial effect, otherwise than relieving the co-existing symptomatic fever, with a succession of blisters only to increase the vexation and disappointment. If we look over the list of local remedies that have been successfully employed in the treatment of the ophthalmia, we will find them to be astringents, as plumb. acet., argent. nit., zinci sulph., &c., and that their beneficial results are in proportion to the amount of astringency which they possess.

Astringents are also indicated on theoretical grounds, the *modus operandi* of which upon the living tissues is to a considerable extent mechanical by contracting the fibres and capillary vessels of the part to which they are applied, by which less fluid is admitted into them. But the astringents ordinarily in use, and derived from the mineral kingdom, are inadmissible during the acute stages, in consequence of the violent irritation they produce if applied directly to the membrane, except in a very ineffectual degree of dilution.

On these grounds, then, I have been led to employ tannin, which is probably one of the most powerful astringents, while its comparative freedom from irritation renders it a safe and effectual remedy for the class of cases which I have proposed. The manner in which I employ it is in the form of solution of tannin, ʒ i.—3 ij. to aq. distil. ʒ i.

A small portion of this is dropped into the eye, which at first causes a smarting sensation, with a gush of tears, and which is succeeded by dryness and a feeling of comfort. This is to be repeated three, four, or a dozen times a day as circumstances require. The effect produced is soon made apparent; the distended capillaries seem to become unloaded of their stagnant contents, increased lachrymation and muco-purulent discharge, if present, is checked, the organ becomes more fitted to perform its office, and the dependent constitutional symptoms are mitigated and disappear. I have now treated a great number of cases most satisfactorily in this manner, without ever having had occasion to deviate from that course in the slightest degree when the result of external causes and unconnected with constitutional diathesis; though chemosis, when present, seem to retard the progress somewhat, probably in consequence of the effused fluid for a time preventing its full constrictive influence upon the capillary vessels. Since I have been thoroughly convinced of the utility of tannin as a remedial agent in this class of cases, I have modified the mode of application to suit the exigencies of the various cases, *e. g.*, by its combination with some aqueous extract of a sedative drug, as solution of morphia, belladonna, opium, &c., to relieve the distressing pain, heat and smarting that always to a greater or less extent accompany this disorder. I have also found it to be extremely useful during

the acute stage of strumous, phlyctenular corneitis, removing the vascularity more expeditely than any other remedy that I have hitherto employed, and probably tending to contraction of the resulting ulcer, and by its combination with the aqueous solution of belladonna, &c., soothes and relieves the intolerance of light; though it has usually been my practice to employ the stimulating mode of treatment as soon as the fasciculi of vessels had disappeared. I have also been careful to secure a suitable regimen, and a dose of aperient medicine when such was deemed necessary.—*Medical Times and Gazette.*

SOME ACCOUNT OF PAULLINIA SORBILIS AND ITS PRODUCTS.

By T. C. ARCHER, Esq.

THE author remarked:—There is no more remarkable plant in the Order Sapindaceæ, if regarded from an economic point of view, than *Paullinia sorbilis*, although, as a plant, it is not well known to the botanical world. From its large seeds is manufactured the substance called “Guarana,” which is extensively used in Brazil, Guatemala, Costa-Rica, and other parts of South America, as a nervous stimulant and restorative. The seeds, deprived of their coverings, are pounded into a paste, which, hardened in the sun, constitutes Guarana. It is used both as a remedy for various diseases, and also as a material for making a most refreshing beverage; and it adds another of those incidents so puzzling in human history of the discovery of such qualities in plants least likely to be suspected: such, for instance, as that the leaves of Tea, the seeds of Coffee and Cacao, the leaves and twigs of the various American Ilexes, and other plants, should have this wonderful restorative effect on the nervous system; and that this should not be a mere vague notion, such as attaches to thousands of other plants, but that it should really depend upon the presence of a chemical principle, the same in all, and the operation of which can be satisfactorily explained. The presence of an alkaloid, which he called Guaranine, was discovered some years ago in Guarana, by Dr. Theodore von Martius, of Erlangen, but its identity with Theine was soon established, and subsequent analyses, especially one by Dr. Stenhouse in 1856, proved that not only was the active principle of Guarana identical with Theine, but that, as far as is known, no other substance yields it so abundantly, the amount being 5·07 per cent. as against good black tea, which yields 2·13, and coffee from 0·8 to 1·00. The mode of using the Guarana is curious and interesting. It is carried in the pocket of almost every traveller, and with it the palate bone or a scale of the large fish (*Sudis gigas*), locally called “pirarucu,” the rough surfaces of which form a rasp upon which the Guarana is grated, and a few grains of the powder so formed are

added to water, and drunk as a substitute for tea. The effect is very agreeable, but as there is a large portion of tannic acid also present, it is not a good thing for weak digestions. Its remarkably restorative power has given it a further great reputation as an aphrodisiac. Another species of this genus, *Paullinia cupana*, also enters into the composition of a favorite national diet-drink. Its seeds are mingled with cassava and water, and allowed to pass into a state of fermentation, bordering on the putrefactive, in which state it is the favorite drink of the Orinoco Indians.—*American Journal of Pharmacy*, from *London Pharmaceutical Journal*, Sept., 1863, from *Proceedings of the Botanical Society of Edinburgh*, in *Gardeners' Chronicle*.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 21, 1864.

THE MALDEN MURDER AND CORONERS.—The recent mysterious murder at Malden, with the equally inexplicable blundering at the inquest and subsequent judicial investigation, must convince everybody, we think, that there must be something at fault in the initial processes of our criminal law. In the very centre of a populous town, at noon-day, and in the most open and public building of the place, a young man is quietly murdered. Citizens had visited the bank but a few minutes before the commission of the deed, and had left young Converse at his desk, and not long afterwards a lad entering found him lying on the floor and groaning. The murderer went, as he came, unseen and unsuspected, and is still unknown. The victim survived his injuries nearly an hour, but did not recover his consciousness. Two wounds were found upon the head, one in the left temple, the other behind the right ear, and of one or both of these he died. As to the precise nature of them we are still unfortunately in doubt, for the two physicians by whom the murdered man was seen give very different descriptions of their appearance. They did agree, however, upon one point—that death had been caused by shooting.

It is not our intention to criticize the medical testimony in this case, for we hold it is never just to form an opinion of professional evidence from newspaper reports alone, and although it would seem fair to infer from the data we have, that the examination of the wounds was not conducted with sufficient care or minuteness by either gentleman, still this is no ground for the ungentlemanly abuse of them which has been lately expressed at great length in one of our leading daily papers, in a communication which exhibits sufficient ignorance of the professional points the writer attempts to throw light upon, to indicate at once the profession to which he belongs. It is to the proceedings of the inquest that we wish to call the particular attention of our readers, as they afford a fair example of the way in which justice must be thwarted in these really important preliminary investigations, unless the coroner has a scientific education. Here was a man mysteriously

murdered in broad daylight and within the hearing of many of his friends. Nothing was seen or heard of the assassin or his weapon. Two physicians give conflicting testimony as to the character of the wounds, and the jury without further examination bury the body, as if seeking to hide rather than explore.

There can be no excuse for the neglect of the coroner to have the body examined at the time by competent medical men, except *ignorance*, and even that will no longer serve should this necessary investigation be longer deferred. Such stupid blundering, however, will constantly recur, so long as non-scientific men are allowed to fill the important position of coroner: for how can such be expected to possess sufficient knowledge to discriminate between conflicting opinions, as in this case, and when to pursue, and when—often of more importance—to repress investigation; or to decide who are the competent and trustworthy medical men to call in council, or who the chemist to conduct the analysis for poison. It is as reasonable to suppose a physician competent to occupy the bench, and give judgment in matters of law. The importance of the coroner's duties are better understood in other countries, where thoroughly educated men, trained to this very calling, hold their appointments, as do the judges, from the crown, and have absolute authority in all criminal cases requiring scientific investigation. Even in London, where the "crown" has hitherto also been an object of ridicule for his notorious incompetency, the authorities have at last been aroused to a proper appreciation of his duties, and have wisely appointed such men as Dr. Lankester to perform them. In Boston we are fortunate enough to have medical coroners, but in our opinion justice would be best served by the appointment of one such officer to each large district throughout the State, to whom should be entrusted the investigation of all cases of a medico-legal character, and who should act as government expert in courts of justice. We feel sure that the profession would gladly second the permanent appointment to such office of some worthy representative of its interests, and thus free itself from the obligation of being summarily called to court, and prevent the occurrence of the disgraceful scenes which now sometimes ensue when rival scientific men meet in the witness box.

THE LATE DR. JOHN C. DALTON.—The following sketch of the life of Dr. Dalton was communicated for the *Daily Advertiser* by one who evidently knew and loved him well:—

Dr. John C. Dalton was born on the 31st of May, 1795, in Boston. He received his early education at the public school then kept in School street, by Masters Snelling and Haskell. When thirteen years of age, he was placed under the care of Dr. Luther Stearns, of Medford, to be prepared for college, with whom he continued till 1810, when he entered Harvard College in the class with James Walker, William H. Prescott, F. W. P. Greenwood, Pliny Merrick, and others less widely known in after life, yet not unworthy of the same companionship. With these associates he passed four happy and industrious years. Here (to use his own language) he formed friendships which time only served to strengthen and confirm.

Graduating in 1814, and not having as yet decided upon a profession, he accepted from his former instructor an ushership in his academy, which he retained for an entire year. In the autumn of 1815, he

became a student of medicine in the office of Dr. Josiah Bartlett, of Charlestown, attended two regular courses of medical lectures in Boston, and a third one, during the winter of 1817-18, in Philadelphia, where he enjoyed the privilege of instruction from the master minds of such men as Casper Wistar, Philip Syng Physic, John Tyng Dorsey, Nathaniel Chapman and James Dewees: having the melancholy distinction, as a member of the class from Massachusetts, of officiating as pall-bearer, at the funeral of the last named, who died before the termination of the course.

In the spring of 1818 he accepted an invitation from Dr. Wyman, of Chelmsford, to succeed him at that place, he having been recently elected to the superintendency of the Lunatic Asylum, then just established at Charlestown.

In 1823, he married the only daughter of Deacon N. Spalding, of Chelmsford. She became the mother of eight children, five only of whom survived her. She died in the summer of 1846.

In the autumn of 1831, Dr. Dalton removed to Lowell, in consequence of the urgent invitation of Kirk Boott, Esq., and of the other gentlemen concerned in the establishment of the infant city, who knew his worth and wished to secure it for their own benefit and that of their families. For twenty-eight years he remained there in the practice of his profession, holding a place, if not the first, yet certainly second to none in public estimation. In 1859 he removed to Boston.

In a memoir furnished to his classmates, a few years ago, he says:—"My life has been emphatically a happy one: not free, of course, from the natural vicissitudes. Though repeatedly called to endure the loss of those dear to me, I enjoy communion with them in spirit, and when occasionally through my own indiscreetness or the unreliability of others, pecuniary losses have befallen me, my equanimity has been undisturbed, since the moral profit and pleasure incident to acquisition ever remains beyond the reach of chance."

After his return to Boston in 1859, he had trials to endure in the deaths, within a few years, of his three elder brothers. A more permanent source of care and anxiety existed in the care of a sister, afflicted with hopeless infirmity of mind and body. For nearly five years he watched over her, an inmate of the same house, omitting no care, no sacrifice of personal ease and pleasure, to administer to her relief. Her death occurred a few months before his own.

Having been for nearly forty years absent from his native place, he found himself, on his return, to some degree a stranger there. But every month that passed away contributed to widen the circle of his friends and to raise him higher in the opinion of the community which he had lately joined. His brothers of the profession at once joyfully admitted him to a place among their honored members, and medical trusts of dignity and importance were eagerly placed in his hands, especially those for which he was always ready, where the only reward was that of a consciousness of usefulness.

He was favored by Providence in seeing his children grow up worthy of his teachings and example. All four of his sons were at one time in the service of their country: two of them in medical, one in civil and one in the military department. Three of them continue so at this moment.

On Saturday, Jan. 2, he stepped out to purchase the "Life" of his

classmate, W. H. Prescott, for a new year's gift to another classmate. He had hardly left his door-step when his foot slipped upon a patch of ice on the sidewalk, and he fell heavily to the ground. He was assisted up, and re-entered the house, and did not immediately suffer very severe pain. But as the pain increased, he went to bed, and a physician was sent for. The pain was repressed by anodynes, but it was not till the next day that he was able to dispense with their aid. Then his mind was as clear as ever. He even regained his appetite, and it seemed as if he would in time recover from the shock. But it soon appeared that an attack of pleuro-pneumonia had set in, and his strength was not sufficient to resist this new enemy. On Friday, at 4½ o'clock, P.M., he breathed his last, surrounded by all he loved best, his sons, who were absent at posts of public duty, having had time to obey the summons which called them to his presence.

Thus passed away from earth one of the best of its children, from a life of usefulness and of good example, favored by Providence in many respects, and in none more than this, that his reflections must have brought to him the calm remembrance of a life well spent. He had always been a religious man. His faith in the immortality promised in the Gospel was unwavering. He felt more fully sensible of his imperfections than any one who knew him could be, but he felt also (to use his own words) "perfect trust in the mercy, justice and goodness of Him, whom His Son has justified us in addressing as 'Our Father in Heaven,' and whom that Son addressed as 'his Father and our Father, his God and our God.'"

Life's duties done, as sinks the clay,
Light from its load the spirit flies,
While Heaven and earth combined to say,
"How blessed the righteous when he dies."

The funeral of Dr. Dalton was generally attended by the members of his profession in this city, and the body was subsequently taken to Lowell for interment. The feeling of sorrow produced in that city by his death was expressed in the following series of resolutions passed at a meeting of its citizens:—

Whereas, it has come to our knowledge that our late fellow citizen, Dr. John C. Dalton, has departed this life, and that his body is to-day to be brought to this city for interment, it is

Resolved, That we declare our unaffected sorrow for the loss of a tried friend, an estimable citizen, and a beloved physician.

Resolved, That our feelings demand some public expression of the high appreciation of his noble character, which an acquaintance of more than a quarter of a century has implanted within us.

Resolved, That we will assemble at the railway station to meet his remains, and unobtrusively follow them to the cemetery.

Resolved, That a request be made to the proper authority for the chiming of the bells, in which our late friend took so great an interest, and was so instrumental in procuring.

Resolved, That records of this meeting, with the resolutions, be sent to the family of the deceased, and also to the Lowell papers for publication.

We have also received the accompanying communication containing a few facts connected with his life and character, from one who only late in life became his friend:—

Not many days ago, Dr. Dalton called to see me. It was not a professional call, and so had its interest—a rare one among men of our calling—in its very friendly character. I shall not forget that call.

Our conversation was on a subject of much interest—the trials of young physicians. Dr. D. gave a very striking illustration of these trials, from his own experience. When living in Chelmsford, he was

called to a case of injury of the thigh-bone. He believed it was a fracture. Time passed, and his patient not recovering, a consultation was suggested by friends. Dr. D. of course agreed, and a distinguished surgical professor, from —, was called in, who examined the case and pronounced it a dislocation, adding that his diagnosis showed how important it was that the physician should be very cautious to avoid hasty opinions in surgical cases. Dr. Dalton also learned that this case was described in a lecture of the consulted professor, and the importance of avoiding a hasty diagnosis in such cases largely dwelt upon. Time passed. Mr. — got about, but was still lame. Some years after, he died. Our friend heard of this, went to the place of his death, and requested that the body might be disinterred. His request was granted. The *post-mortem* showed every mark of *fracture*, and thus was fully confirmed Dr. Dalton's diagnosis. Our friend immediately wrote to Prof. —, stating the result of the autopsy, and closed with saying that it was very important in such cases to avoid a "hasty diagnosis."

This case was an emphatic instance of the pursuit of Truth under Difficulties. Such a passage in the beginning of professional life, was both prophecy and promise of future character and usefulness.

The last time I saw our late friend was at a meeting of our District Medical Society. I sat next to him. He said he had prepared a paper on Uterine Polypus, and asked me to allude to such cases of this disease as had fallen under my observation. The paper alluded to was a statement of the author's observations of polypus, together with a very elaborate and valuable *résumé* of what had been written upon the subject by early and later writers.

It is rare for old men to make friends. Johnson tells us that it was a constant effort with him in his old age to keep his friendships "in repair." He certainly was successful. No one will be surprised to hear this, when it is recollected that Johnson's social proclivities were such as placed him at the very head of society, in the widest use of the term. He had, or made, leisure for the largest social enjoyment, and who has done more for literature in the presence of circumstances which would have driven any other intellect, and less moral energy, into despair?

In the hurry, the labor and fatigue of medical life, how little of time or of strength is there for social relaxation, or for the repair of friendships. That visit of our friend, extended as he feared beyond all reasonable bounds, is remembered with a freshness which the news of his sudden death has made stronger, and which will be among the few, but treasured memories of my old age.

W. C.

Dr. Dalton was appointed a member of the State Medical Commission a short time before his death, in place of the late Dr. Hayward.

DANGER OF CAUTERIZING THE CAVITY OF THE UTERUS.—M. Nonat, in a communication to the Academy of Science, expresses his great surprise at the statement made in a recent paper by M. Courty, that he had applied the actual cautery and solid nitrate of silver to the cavity of the uterus and its cervix hundreds of times without ever meeting with any accident, whether primary or secondary. Whatever may be the case at Montpellier, this is not so at Paris, and M. Nonat is ena-

bled, both from his own practice and that of numerous distinguished surgeons, to state that such cauterization is attended with extreme danger, so that it should only be had recourse to with the greatest circumspection. Stricture or even obliteration of the uterine passage may follow it, but a still more frequent and redoubtable accident is the production of sub-acute metro-peritonitis, or peri-uterine phlegmasia, leading to suppuration and death. M. Courty considers the only contra-indication of his procedure is the presence of an inflammatory condition of the uterus; but a far more important one really is the peri-uterine phlegmasia which so often co-exists with diseases of the uterus. A long experience has taught M. Nonat the necessity of the greatest care and distrust in this matter, and has induced him to protest against these optimist conclusions of M. Courty, which are calculated to inspire those who are disposed to imitate him with a dangerous security.—*Medical Times and Gazette*.

MORTALITY OF PROVIDENCE, R. I., FOR 1863.—Dr. Snow, the City Registrar, reports as follows concerning the mortality of that city for the last year:—"The number of deaths in Providence in 1863 was 1,215, an increase of nearly 33 per cent. over the number in 1862. The deaths in 1863 were more than in any year since 1854; but in proportion to the population the mortality was not large. We estimate the population of the city at the present time to be at least 55,000, which would give one death in 45.27 for the year 1863."

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 16th, 1864.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	71	50	121
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.8	36.4	78.2
Average corrected to increased population	00	00	85.95
Death of persons above 90	0	2	2

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
25	5	13	3	0	0	2	7

PAMPHLETS RECEIVED.—Medical Logic: An Introductory Lecture to the Medical Department of the University of Michigan, Session of 1863-64. By S. G. Armor, M.D., Professor of the Institutes of Medicine and Materia Medica. (From the Author.)

DIED.—In Enfield, Conn., Dr. Asa L. Spaulding, aged 63 years.—In London, England, Dec. 25th, 1863, Francis Boott, M.D., a native of Boston, a graduate of Harvard University, and an Honorary Member of the Mass. Medical Society.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 16th, 121. Males, 71—Females, 50.—Accident, 3—apoplexy, 2—disease of the bowels, 1—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 2—bronchitis, 2—burns, 1—cancer, 1—cholera infantum, 1—consumption, 25—convulsions, 4—croup, 5—debility, 2—diarrhoea, 1—diphtheria, 7—dropsy, 2—dropsy of the brain, 4—drowned, 1—exhaustion, 1—scarlet fever, 13—typhoid fever, 2—gastritis, 1—haemorrhage, 1—disease of the heart, 4—infantile disease, 2—intemperance, 3—congestion of the lungs, 4—inflammation of the lungs, 3—marasmus, 4—old age, 3—peritonitis, 1—pleurisy, 1—rheumatism, 1—scrofula, 2—sore throat, 2—disease of the stomach, 1—unknown, 6.

Under 5 years of age, 43—between 5 and 20 years, 16—between 20 and 40 years, 26—between 40 and 60 years, 20—above 60 years, 16. Born in the United States, 83—Ireland, 32—other places, 6.

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THE PROPERTIES AND USES OF THE CALABAR BEAN.

[Translated for the Boston Medical and Surgical Journal.]

BY HENRY W. WILLIAMS, M.D., OPHTHALMIC SURGEON OF THE CITY HOSPITAL,
BOSTON.

MESSRS. EDITORS,—As an article in the *Annales d'Oculistique* contains the best statement I have seen of what is known of the Calabar bean (*Physostigma venenosum*), with an account of experiments in which I myself took part at Utrecht, I have made a translation of its important portions, hoping it may interest your readers. Not to occupy too much space in your pages, I omit a long botanical description, and will merely premise, that the bean is the product of a climbing plant found at Calabar, on the Western Coast of Africa, and employed among the natives for the trial by ordeal, being publicly administered to accused persons as a supposed test of their innocence or guilt. It is extremely poisonous; but if the individual escapes, in consequence of the supervention of vomiting, he is considered innocent, and his accuser is submitted to the same criterion. The bean itself is about an inch in length, and covered with a dark, almost horny envelope. The article is by Mons. Warlomont, of Belgium.

The materia medica is composed of a large number of agents, styled therapeutic, which have found a place there, thanks to the results obtained by empirical experiment, but of many of which the value is still contested. Those only which rest upon a well-determined physiological effect have gained a permanent place, for they alone have a firm and solid basis. Opium, belladonna, digitalis, are legitimately in possession of the place which their physiological properties have gained for them, and from which we have educed, without much difficulty, the therapeutic applications from which our science has derived such numerous and important advantages.

It is, then, a fortunate thing for medicine that an agent has been discovered, having well-marked physiological properties which had never before been observed in any known substance, and offering a

new horizon to therapeutics by filling a void which has long been recognized and deplored, but which will henceforth exist no longer.

Whilst we possessed in belladonna, hyoscyamus, stramonium and their alkaloids, infallible means for dilatation of the pupil, which is so often necessary in the treatment of diseases of the eye, the power of contracting the pupil did not belong to any known product. Opium acted to a certain extent, it is true, in this way; but its action was feeble, irregular and uncertain, and only very limited and doubtful results could be obtained from its use. It is not thus with the *Calabar bean*; its power of contracting the pupil is energetic, prompt and incontestable, and physiology as well as therapeutics has already derived advantages from it.

Dr. Daniell prepared a short paper on the poisonous properties of the Calabar bean, in 1846; but it was not till 1862 that its anti-mydriatic qualities were announced by Dr. Frazer, of Edinburgh, who discovered them, and brought specially to notice by Dr. Robertson, who still further investigated them and pointed out to the profession their great practical value.

ACTION OF THE CALABAR BEAN ON THE EYE.

1. *Effect on the Pupil.*—When even a very small amount of the extract of Calabar bean has been introduced within the eyelids, the pupil begins to contract considerably in the course of eight or ten minutes—usually without pain or inconvenience. If the dose is larger, or applied to a sensitive individual, it may give rise to palpebral, orbital or frontal pain, sometimes severe and of considerable duration. Sometimes the eye itself feels heavy and painful; but these symptoms are only rarely exhibited. Sometimes the pupillary contraction takes place slowly and by regular progression, sometimes by starts and oscillations.

When an eye has been submitted to strong and repeated doses of extract of Calabar, and its full action upon the pupil has been established, the pupil is capable of still further contraction if exposed to concentrated solar rays, and, if the same eye is placed suddenly in a dim light, slight dilatation of the pupil takes place. The Calabar, therefore, does not determine the maximum of contraction of which the pupil is capable.

As regards the antagonistic effects of belladonna and the Calabar bean, it has been pointed out by all who have experimented that the duration of the effect of the latter is less than that of the former. Thus, when by large or repeated doses of the anti-mydriatic, dilatation of the pupil previously induced by atropia has been overcome, not more than an hour has passed before the atropia has gained the ascendancy and neutralized its antagonist.*

* It is not unlikely that the apparent comparative inefficiency of action of the Calabar may be due to the fact that most of the experiments have been made with "Calabar paper," prepared by repeated dippings in a solution of the extract of the bean, or at most with the

2. *Effect upon the Ciliary Muscle and the Power of Accommodation.*
—Its action upon the pupil is neither the sole nor the most interesting effect produced upon the ocular system by the Calabar bean. At the same that it narrows this aperture it acts also upon the accommodation; but these effects are wholly independent of each other, for the contraction of the pupil often persists for a long time after the disturbance of the function of accommodation has subsided. This action consists in an increase of the refraction of the eye, and consequently in bringing yet closer the near point of distinct vision. This latter phenomenon last longer than the other, but rarely beyond an hour and a half. After this time the muscles of accommodation present a singular condition, resulting from a sort of strabismus in the tensors, so that coöperative action of the two eyes, in binocular vision, becomes difficult.

In the accompanying tables, Dr. Hamer, of Utrecht, has given most accurate observations as to the duration and extent of the modifications of accommodation.

FIRST EXPERIMENT, MADE WITH A SQUARE OF CALABAR PAPER.

Subject of the Experiment.	Age.	Which Eye.	Minutes after the Application.	Far Point.	Near point.	Latitude of Accommodation.	Acuteness of vision.		Size of pupil in millimetres.
							Without glasses.	With glasses.	
Mr. Schuurman.	24	Right.	0	6 inches.	3 in. 3 l's.	$\frac{1}{7\frac{1}{11}}$		$\frac{30}{8}$	4.96
			10	5 "		$\frac{1}{9\frac{2}{7}}$			4.05
			35	3 "	2 in. 5 l's.	$\frac{1}{12\frac{3}{7}}$			1.60
			60	4 "		$\frac{1}{6\frac{1}{5}}$			1.56
			155	6 "		$\frac{1}{4\frac{2}{5}}$			

Generally the modifications of the refraction follow immediately upon the production of myosis. The increase of refraction con-

extract itself, and not with the active principle (or Calabarine), which, if hitherto obtained at all, has probably been imperfectly prepared—the extremely small amount of the bean which could be found in Europe not having allowed of experiments on a large scale. Of course, the preparations of the *extract* of the bean could not be expected to compare, in degree of power, with solutions of atropia, the *active principle* of belladonna.

tinues some ten minutes from the time it begins to manifest itself; it then decreases, and ordinarily has disappeared at the end of an hour. It is generally equivalent to a lens of eight or ten inches focus.

At the same time, another phenomenon equally remarkable is observed: the near point of distinct vision is brought as much nearer the eye as it would be by a glass of twenty-four inches. If the dose of Calabar has been feeble, the far point remains unchanged, even though the ciliary muscle is very active; the range of accommodation in these cases is therefore increased by the whole extent to which the near point has been approximated. On the contrary, under the influence of a high dose the far point may be brought nearer, by the exercise of the power of accommodation.

In Experiment I., the paper produced irritation of conjunctiva. It was removed at the end of five minutes. Reading, with the book held near the eye, caused a sensation of pain; but not when reading large letters at a distance. After 155 minutes the right eye, with the aid of a concave glass of eight inches, saw much better than the left.

SECOND EXPERIMENT.

Subject.	Age.	Which Eye.	Minutes after Application.	Far Point.	Near Point.	Latitude of Accommodation.	Acuteness of vision.		Size of pupil in millimetres.
							Without glasses.	With glasses.	
Dr. Williams.	42	Left.	0	∞ (Infinite distance.)	7 in. 9 l's.	$\frac{1}{7\frac{3}{4}}$	$\frac{1}{20}$		3.40
			10	"		"			3.04
			20	36 inches		$\frac{1}{9\frac{7}{8}}$			2.32
			30	24 "	5 " 11 "	$\frac{1}{7\frac{6}{7}}$			1.90
			60	45 "	6 " 3 "	$\frac{1}{7}$			1.90
			72	80 "		$\frac{1}{6\frac{2}{3}}$			1.44
			85	∞		$\frac{1}{6\frac{1}{12}}$			

Ten minutes after the application of the paper, pain was felt in the orbit. The paper was removed after five minutes. Even when the diameter of the pupil was reduced to 1.90 millimetres, it still contracted when exposed to strong light. Objects appeared larger.

THIRD EXPERIMENT.

Subject.	Age.	Which Eye.	Minutes after Application.	Far Point.	Near Point.	Latitude of Accommodation.	Acuteness of vision.		Size of pupil in millimetres.
							Without glasses.	With glasses.	
Dr. Hamer.	25	Right.	0	80 inches.	4 in. 7 l's.	$\frac{1}{4\frac{6}{7}}$	200	210	4.13
			5	20 "		$\frac{1}{6}$			
			12	7 "		$\frac{1}{9\frac{1}{3}}$			3.24
			20	7 "	4 " "	$\frac{1}{13\frac{1}{2}}$			
			25	7 "	3 " 9 "	$\frac{1}{8\frac{1}{3}}$			2.53
			43	7 "		"			1.63
			50	10 "		$\frac{1}{6}$		200	1.30
			55	12 "	3 " 9 "	$\frac{1}{5\frac{1}{2}}$			
			65	18 "		$\frac{1}{4\frac{3}{4}}$			1.10
			70	20 "		$\frac{1}{5}$			
			90	24 "		$\frac{1}{4\frac{1}{2}}$			1.00
			110	36 "		$\frac{1}{4\frac{2}{3}}$			
			140	80 "		$\frac{1}{4}$			

Four minutes after the application of the paper to the conjunctiva, painful contractions, like electric shocks, were felt in the lower lid. After fifteen minutes much pain in the globe, which was still further augmented by reading at the distance of a foot. At the end of fifty minutes the iris appeared to bulge forward and to have become insensible to light; the painful sensations persisted; to the right eye distant objects seemed less bright, white paper appearing brown; muscæ volitantes were seen. The spasm of the accommodative power declared itself after twenty minutes, and had not wholly passed off eight hours after. Twenty-four hours after the application of the Calabar, the pupil was still very much smaller than that of the right eye.

In experiments made by Dr. Wecker, of Paris:—in Mr. Pactovan, whose near point was 3 inches, it was brought to $1\frac{3}{4}$; in Dr. Hunt, from 3 to $1\frac{3}{4}$; and in Dr. Salazar, from 4 to 3 inches.

These results perfectly accord, as will be seen, and establish the propositions we have advanced, which are in a great measure borrowed from Dr. Hamer's excellent work, already mentioned.

3. *Effect on Vision.*—At the moment that contraction of the pupil is produced, and that consequently an obstacle is presented to the introduction of a normal amount of light, there is a sensation as if it had become twilight. According to M. de Graefe, there is a moment when the acuteness of vision is diminished one third. This difference, however, is scarcely observed when the light is intense, but is quickly noticed if the light is dim. In some short-sighted persons a sudden and very transient improvement of vision for distant objects has been observed, when a great degree of myosis had been rapidly brought on.

Astigmatism has also been sometimes produced, which Dr. Robertson explains on the supposition that the solution of Calabar had acted unequally on different parts of the ciliary muscle. This same difference of effect would explain the irregular contraction of the pupil which has sometimes been observed.

4. *Mode of Action on the Organ of Vision.*—We know that by irritating the sympathetic nerve we cause dilatation of the pupil; but, section of this nerve increases yet more the contraction caused by large doses of Calabar. The Calabar acts on the sphincter of the iris by irritation, by causing spasmodic action of the third pair; as an antagonist of atropia, which acts by irritation on the radiating fibres of the iris and the tensor choroidæ, through the sympathetic. This is fully demonstrated, first, by the fact that the pupil contracts much more under its influence than it does after paralysis or section of the sympathetic; and, secondly, because the pupil may be acted on even more fully by the Calabar when the sympathetic has been cut. Prof. Donders, of Utrecht, has been able to produce considerable enlargement of the pupil already under the influence of the Calabar, in a rabbit, by exciting the sympathetic;

and having, in another rabbit, cut the sympathetic on one side and applied the Calabar to both eyes, he obtained the greatest amount of contraction on the side where the nerve had been cut.

Like atropine, calabarine acts only on the eye to which it has been applied, and, like it, acts by penetrating to the anterior chamber. It even acts on eyes where the cornea has been perforated, an important fact as regards therapeutics.

THERAPEUTIC USES OF CALABAR BEAN.

1. *In Mydriasis.*—Artificial mydriasis may be corrected, to a certain extent at least, by the use of this remedy. After having dilated the pupil, for an examination of the deep-seated portions of the eye with the ophthalmoscope, we may spare the patient the annoyance caused by a considerable duration of this dilatation, by introducing within the lids a little of one of the preparations of the extract of Calabar bean. The exact amounts requisite to completely neutralize a given strength of a solution of atropia remain to be determined.

Mydriasis, when existing pathologically, may be advantageously modified by the extract of Calabar. Even when the iris has become completely insensible to light, the pupil contracts promptly under its application. To ensure its efficacy, the remedy must be continued for a time. Messrs. de Graefe, Workmann, Hulke and Hart have already reported cases of radical cure of paralysis of the third pair, with mydriasis, where the power of accommodation had been wholly or partially lost. Mr. Soelberg Wells reports an instance of the permanent cure of a patient affected with rheumatic paralysis of the constrictor of the pupil and of the ciliary muscle of the right eye. Vision was so imperfect that the patient could not read, or thread a needle, with both eyes open. She had diplopia and amblyopia in the right eye. The application of the extract to both eyes demonstrated its special action upon the power of accommodation. The pupil of the healthy eye contracted very much, and that of the affected eye, which measured three and a half lines in diameter, was diminished to two thirds of a line within a quarter of an hour after the application. The sight was at once so much improved in this eye that she could read the finest print.

Glaucomatous mydriasis, if the iris has not become completely atrophied, does not prevent the action of the Calabar bean. It has the effect, in this condition of things, to contract the pupil, render the iris tense, and thus offer a larger surface to the instruments with which it is taken hold of in performing iridectomy. The danger of wounding the crystalline is at the same time diminished.

1. *In Paralysis or Fatigue of the Accommodative Power.*—Among the organs which may remain paralyzed after an attack of diphtheria, is to be reckoned the ciliary muscle; the power of accommodation is thus wholly or partly lost. Severe fevers, and especially

typhoid fever, also sometimes leave behind them a general atony, in which the organs of accommodation may share. In both these cases the Calabar bean may be of great service in restoring the contractile power of the ciliary muscle.

3. *In Diseases and Anomalies of the Refractive Power.*—The power possessed by the Calabar bean of bringing the point of distinct vision nearer to the eye, indicates its use in cases where this point is at too great a distance, as, for instance, in hypermetropia. Persons who require spectacles for seeing small objects may replace them, to a certain extent, if they desire it, by the use of a Calabar eye water. It remains, however, to be determined by experience whether the action of this remedy may be indefinitely kept up, as in the case of atropia, or whether its influence will after a time cease to be felt. We know, moreover, that there is a certain degree of diminution of the clearness of vision (independent of what results from the contraction of the pupil) under the influence of the bean: these facts may in a degree counterbalance the advantages to be gained as regards range of vision. Furthermore, the eye sometimes becomes slightly heavy and painful after its application, which should also make us careful in our experiments.

The action of the Calabar may also be useful in myopia, since, by bringing the point of most distinct vision nearer, without approximating the far point, it enlarges the latitude of accommodation; and it may sometimes be of use to the short-sighted to bring their near point yet closer.

4. *In Wounds at the Margin of the Cornea, with Hernia of the Iris.*—As we have in atropia an efficient means of drawing the iris towards its periphery, and preventing it from becoming implicated in an ulceration or a wound of the centre of the cornea, so we have in the Calabar bean a means of averting hernia of the iris, which may threaten to take place through lesions near the corneal circumference.

MODE OF PREPARATION AND USE.

The only active part of the plant is the bean itself, its hard, horny envelope being discarded. Its alcoholic extract, prepared by exhausting the powdered bean with alcohol and evaporating the solution, may be applied by taking a minute quantity of it upon a fine pencil, moistened with water, and applying it to the conjunctiva of the lower lid. The specific action will be observed in five minutes.

Mr. Streatfeild's ingenious invention of a fine tissue paper impregnated with a solution of atropia of given strength, so graduated in squares that one square shall represent a certain quantity of the solution, has also been applied to the preparation of paper impregnated with a solution of the extract of Calabar—and it is in this form, principally, that the remedy can be obtained, the small quantity of the bean to be found in Europe having been entirely insufficient to meet the demand for the extract. A square of this

paper, measuring an eighth of an inch, placed inside the lower lid, begins to act in twenty minutes, and its effects continue several hours.

Another excellent preparation is a solution of the extract in glycerine—two and a half grains of the extract in one hundred minims of pure glycerine.

CASE OF THE LATE DR. DALTON.

[Reported to the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

BY J. MASON WARREN, M.D.

DR. WARREN gave the following account of the illness and death of the late Dr. John C. Dalton, the valuable and distinguished physician whose case has excited so much interest both among the medical profession and the public generally:—On Saturday evening, Jan. 2d, Dr. Dalton slipped on the ice near his own house, falling upon a piece of iron, the model of a cannon, about six inches long and one inch in diameter, which he had in his pocket, and which was forcibly driven against his left side. He went home and lay upon the sofa until bed-time, complaining of general uneasiness, and expressing the feeling that he had received some ill-defined injury.

In the middle of the night he was attacked with violent pain in the left hypochondriac region, extending thence over the whole abdomen. He sent for Dr. Edward H. Clarke, under whose charge he remained during his illness. At this time he expressed the fear that he was suffering from intussusception of the intestine. Large doses of opium were given without material relief, after which ether was administered by inhalation, and the effect of it was kept up during the greater part of thirty-six hours. He was seen on Sunday afternoon by Dr. Warren, who continued in attendance with Dr. Clarke, from day to day during the remainder of his illness. After a very critical examination, no positive evidence could be discovered of injury to any internal organ. The bowels had been thoroughly evacuated by an enema immediately after the first visit of Dr. Clarke. He had passed no urine, nor was there any sign of any collection in the bladder. At his own request, however, a catheter was passed into the urethra, but it was arrested at the neck of the bladder by spasm, and no farther effort was made. The absence of the secretion was attributed in part to the great quantity of opium which he had taken, together with the ether which he had inhaled during so many hours, and which was attended by profuse perspiration. The stomach having become tranquilized after the etherization was stopped, and some hot drink administered, warm applications being at the same time made over the pubes, micturition took place spontaneously, no abnormal appear-

ance being shown by the urine, or in the urinary organs, during the remainder of his illness.

There had been at first slight marks of contusion on the abdomen and lower part of the chest, which, however, soon disappeared. In the hypochondriac region, for the first day or two, there was an induration of limited extent, which appeared, however, to be due as much to an instinctive action of the muscles to resist pressure as to any internal injury caused by the contusion. There was more dulness in the left lumbar region than in the corresponding situation on the right side, and this dulness gradually increased in extent as the case advanced. The respiration was perfectly normal in the very lower part of the chest, where the injury was received. There was no tenderness on pressure when Dr. W. saw him, either in the chest or abdomen, although this symptom had been previously noticed; and from the general absence of decided symptoms in the regions noticed, it was surmised that there might be an injury of the spleen, with some effusion of blood. On Monday, his symptoms seemed to be of a favorable character; on Tuesday morning there was decided evidence of pneumonia in the lower part of the left lung, which gradually increased, involving more or less of both lungs, until death ensued on Friday, at 4 o'clock, P.M. Dr. Dalton had complete possession of his senses until within a short period of his death, and arranged all his affairs with coolness and deliberation.

There has been a remarkable mortality in the family of Dr. Dalton within a short time, three of his brothers and two sisters having died within the past five years, most of them suddenly; and it is worthy of mention that one of his brothers, who received a fall on the ice, somewhat like his own, was seized after a few days with double pneumonia, which terminated fatally.

The following account of the autopsy is furnished by Dr. ELLIS. There was extensive pneumonia, involving both lungs, the left lower lobe being gray, the corresponding part of the right still red. The lower part of the upper right lobe was similarly affected, and the whole of the left highly cedematous.

A small amount of blood was seen upon the peritoneal surface on opening the abdominal cavity, but the subperitoneal tissue was extensively infiltrated with the same, which extended into the mesocolon, omentum and other folds. Around the left kidney was a large blackish coagulum, and in the hilus a transverse fracture, perhaps an inch long and a third of an inch in depth at the deepest part. To this the coagulum adhered firmly.

Both kidneys were large, and quite soft. On examining a portion with the microscope, the tubuli were found crowded with granular epithelium, so that all appearance of a tube was lost.

The spleen was small and quite soft.

The liver was of a pale-red color, but in other respects normal.

ON A SIMPLE DRESSING FOR RECENT BURNS.

BY JOHN H. PACKARD, M.D., OF PHILADELPHIA.

IN the spring of 1853, while an officer of the Philadelphia City Dispensary, in Fifth Street, I was called one day to attend a German manufacturer of fancy soaps, in the neighborhood, who had been severely burnt over the face, one arm, and the side, by the blazing up of a quantity of alcohol. I visited him for several days, using from the outset the "carron oil," or mixture of linseed oil and lime water, as I had been taught. But this failed to allay his pain, even with the aid of anodynes given internally; and becoming dissatisfied, he dismissed me, and procured the services of an old friend of his, formerly a surgeon in the Austrian army. On my seeing him a short time afterwards, he told me that his friend had given him immediate relief by the application of fresh lard; and the appearance of the injured parts was indeed surprisingly favorable.

Bearing this case in mind, I made trial of the plan suggested as soon as an opportunity offered itself, and was so well satisfied with the result that I continued its use. Since that time there have come under my care a great many cases of burns and scalds of all degrees of extent and severity; but none in which the simple dressing above mentioned has not answered well. It has repeatedly, I do not know how often, occurred to me to see patients who have had other dressings applied, but whose sufferings continued unrelieved until the lard was put on.

Some of these instances have impressed me very forcibly. One was that of a child about three years of age, to whom I was accidentally called. He had pulled a kettle of boiling water off a table upon himself, and was badly scalded over the face, upper part of the chest, and arms. His mother had applied linseed oil and lime-water, but to no good purpose; he was screaming and crying violently with pain. Some fresh lard having been brought, I dressed his injuries with it, when he immediately ceased crying, and in a few minutes fell into a sound sleep. His recovery was very rapid.

Another case occurred to me a week or two since. A child four years old was reaching for some plaything on a mantel piece over a grate, when his clothes (he was in petticoats) swung out against the fire, and he was instantly in flames. Before the fire could be put out he was burned over both thighs, both arms, the body, the back of the head, and slightly over the face. When I saw him, about two hours afterwards, he was suffering severe pain, and very restless, although dressed with carron oil. As soon, however, as the entire burnt surface was covered with fresh lard, he became easy, and remained so until his death, which took place in about eighteen hours from the time of the accident.

As has been already stated, these cases are among very many oth-

ers which have come under my notice. They impressed themselves on my mind because of the very marked relief given by the lard when other means had failed. Moreover, in children, we can as a general rule estimate the amount of suffering by the amount of complaint made; whereas, adults will often either exercise self-restraint, or subdue the expression of pain from the mere expectation of speedy relief.

The "carron oil" is well known to the public as well as to the profession; so that it is often applied by the bystanders or friends, in cases of burn, before the arrival of the surgeon. Its use is advocated in preference to that of any other article, in an able paper on the injuries in question, contributed by Dr. John Ashhurst, Jr., to this Journal for July, 1862; and this is the only one of the points so well set forth by him, to which I would take exception. The smell of linseed oil is very offensive and sickening, while the lime-water, never wholly incorporated with the oil, is apt to evaporate at many points, leaving the linen or other stuff upon which it is spread sticking to the skin. By covering the dressing with oiled silk, we may indeed obviate this annoyance; but oiled silk, although usually at hand in a hospital, is seldom to be had in any quantity in private houses.

What we want to do, in dealing with a burn, as regards local treatment, is simply to protect it altogether from irritation; reference being had here, to the early period of the case only, and not to its later stages, when stimulation is often called for. If, therefore, we cover the injured surface with a bland, unirritating and air-proof medium, our object will be gained. Such a medium I believe to be best furnished by fresh lard.

This material can almost always be procured in any desired quantity, and at the shortest notice. If salted, it can be easily deprived of the salt by washing with water. My own practice is to spread it thickly on pieces of very soft old linen or muslin (old table-cloths are excellent), and then tear off pieces of suitable size to amply cover the affected parts. The great object is to apply the dressing accurately to the surface. For the face, a mask may be readily made of a piece of the spread stuff, the eyelids, or ears, if involved, being first covered with small bits of it. When a limb is concerned, it is better to tear off strips and wrap the part lightly with them, like a common bandage, except that no reverses are made. Or reverses may be made, the surface of each being smeared with the lard before it comes on the skin. As it is impossible to dress burns neatly, we may as well discard at the outset all idea of doing so, and aim wholly at promoting the comfort of the sufferer.

In very warm weather, or when the patient is to remain in a heated atmosphere—an important advantage in almost every case of severe and extensive burns—the lard may be deficient in "body;" it is then necessary to add to it a small proportion of simple cerate.

About one part of cerate to four or six of lard will usually answer the purpose.

So much has been written on the treatment of burns, from the earliest times to the present day, that it may seem presumptuous to attempt to throw any new light on the subject. But, so far as my reading goes, the simple dressing I have now advocated has never been more than mentioned by any writer, nor have I met with any knowledge of it among my professional friends. So completely has it satisfied me, after a very extensive trial, that I feel bound to make its value known to others, confident that they will not be disappointed in its effects.—*Amer. Jour. of the Medical Sciences.*

NOTE ON FORMOSA CAMPHOR.

BY ROBERT SWINHOE, F. G. S., &c., H. M. CONSUL AT TAIWAN.

THE manufacture of this article has for some years been monopolized by the Taotai (or head Mandarin) of the island, and its sale farmed out to wealthy natives. In former years, a good deal of the drug was clandestinely produced, and smuggled across to China, where it was largely bought up by foreign speculators, and carried to Hongkong for shipment to Calcutta, at which place it finds the readiest market, being used by the natives of Hindostan for lubricating the body and other domestic purposes. But now its monopoly is so closely watched that almost the entire trade in it falls to the lucky individual whose Chinese agents can secure the monopoly. This bad system has occasioned the price of the article in Hongkong to increase considerably in value, and to make the profits accruing to the fortunate monopolist almost fabulous. The cost of the drug, I learn, amounts to only six dollars at its place of manufacture. The monopolist buys it from the Mandarin at 16 dollars the pecul, and sells it in Hongkong at 28 dollars. The gigantic laurel (*Laurus camphora*) that yields the camphor, covers the whole line of high mountains extending north and south throughout Formosa. But as the greater part of this range is in the hands of the aborigines, the Chinese are able to gain access only to those parts of the mountains contiguous to their own territories that are possessed by the more docile tribes. The trees, as they are required, are selected for the abundance of their sap, as many are too dry to repay the labor and trouble of the undertaking. A present is then made to the chief of the tribe to gain permission to cut down the selected trees. The best part of the tree is secured for timber, and the refuse cut up into chips. The chips are boiled in iron pots, one inverted on another, and the sublimated vapor is the desired result. The camphor is then conveyed down in carts of rude construction, and stowed in large vats, with escape-holes at the bottom, whence exudes an oil, known as *camphor-oil*, and used by Chinese practitioners for its medicinal properties in

rheumatic diseases. Samples of this oil have been sent home, and it may eventually become a desideratum in Europe. From the vats the camphor is stowed in bags to contain about a pecul each, and is thus exported. The Chinese government has empowered the Formosan authorities to claim on its account all the timber produced by the island for ship-building purposes; and it is on this plea the Tao-tai appropriates the prescriptive right of dealing in camphor. About 6000 peculs of the drug are annually produced in the neighborhood of Tamsuy.—*Am. Jour. of Pharmacy*, from *London Pharmaceutical Journal*, Dec. 1863, *Extracted from Paper read before the British Association at Newcastle.*

Bibliographical Notices.

On Asthma: its Pathology and Treatment. By HENRY HYDE SALTER, M.D., F.R.S., Fellow of the Royal College of Physicians, &c. &c. Philadelphia: Blanchard & Lea. 1864.

No disease has caused more suffering among men, or more guess-work in pathology and empiricism in therapeutics than asthma, and any book which promises to enlighten us with regard to its nature will find eager readers. Many may be already familiar with its pages, in the form of signatures, as they have been issued during the past two years, by the publishers of the *Medical News and Library*, who now offer it to the public in a more convenient shape. The author first considers the various theories in vogue in relation to its nature, and then explains his own views in the following propositions:—

“1. That asthma is essentially, and, with perhaps the exception of a single class of cases, exclusively, a nervous disease; that the nervous system is the seat of the essential pathological condition.

“2. That the phenomena of asthma—the distressing sensation and demand for extraordinary respiratory efforts—immediately depend upon a spastic contraction of the fibre-cells of organic or unstriated muscle, which minute anatomy has demonstrated to exist in the bronchial tubes.

“3. That these phenomena are those of excito-motory or reflex action.

“4. That the extent to which the nervous system is involved differs very much in different cases, being in some cases restricted to the nervous system of the air-passages themselves.

“5. That in a large number of cases the pneumogastric nerve, both in its gastric and pulmonary portions, is the seat of the disease.

“6. That there is a large class of cases in which the nervous circuit between the source of irritation and the seat of the resulting muscular phenomena involves other portions of the nervous system besides the pneumogastric.

“7. There are other cases in which the source of irritation, giving rise to the asthmatic paroxysm, appears to be central—in the brain; consequently, in which the action, though excito-motory, is not reflex.

“8. That there is yet a class of cases in which the exciting cause of the paroxysms appears to be essentially humoral.”

The chapters which follow, in relation to the clinical history of asthma, its ætiology and consequences, are very clearly written and are full of interesting matter. Under the head of Varieties of Asthma, we notice a form produced by contact with the fur of the domestic

cat, which the author speaks of as previously undescribed, and in the cases he had observed the symptoms were produced only by playing with the animal, but we have seen a gentleman so susceptible to this strange influence as to recognize the unseen entrance of a cat into a crowded room.

The treatment of asthma is fully discussed, and forms, perhaps, the most valuable portion of the book. Two methods are omitted, however, from the author's list of remedies, which certainly deserve a high rank; namely, the inhalation of arsenic fumes, and the internal use of sulphur. Of the action of the former in controlling the paroxysms we have heard many favorable accounts, and we know of three cases in which life-long and constant sufferers from this disease have been completely cured by the administration of a few grains of washed sulphur daily for several months. This mode of treatment was introduced by Dr. Duclos, of Tours, a translation of whose article upon the nature and treatment of asthma will be found in Vol. LXIV., pp. 484 and 497 of this JOURNAL. At the close of the volume there will be found an interesting series of narrative cases.

The Medical Formulary. By BENJAMIN ELLIS, M.D. Eleventh Edition—by ROBERT P. THOMAS, M.D. Philadelphia: Blanchard & Lea. 1864.

It seems hardly necessary to say more of this book than to announce the appearance of the eleventh edition under the able direction of Prof. Thomas, of the Philadelphia College of Pharmacy. It has been brought up to the present state of medical science by the addition of a large amount of new matter, and has been arranged in conformity to the nomenclature of the new Pharmacopœia. We notice the introduction of many prescriptions and preparations which are used with great success by foreign physicians and surgeons, but which are still comparatively unknown here. The work in every respect is praiseworthy, and should be found in every medical library.

Synopsis of the Course of Lectures on Materia Medica and Pharmacy. By JOSEPH CARSON, M.D. Third Edition, revised. Philadelphia: Blanchard & Lea. 1864.

THIS book is an outline of the author's lectures delivered at the University of Pennsylvania, and is designed as a convenient guide to them in their studies in this extensive branch of our art. It takes the place, to a certain extent, of the large works on Therapeutics and Pharmacy, but should only be used in connection with them. The volume also contains three lectures on the operation of medicines through the medium of the nervous system and by absorption.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 28, 1864.

IS THERE DANGER FROM OVER-STUDY?—We find the following in a recent number of the *Medical Times and Gazette*:—

“Dr. Ellis, in his inaugural address to the students of the Catholic University, Dublin, says:—

“‘Be not afraid of injuring your health or shortening your lives by hard study. I have had many opportunities of observing the causes of death in persons of studious habits, and I never could fairly attribute the death of a single person to excessive study. In order to satisfy your minds on these points, I have procured a list containing the names of the most studious men who have lived during the last two centuries, together with the ages at which they died:—Sir Isaac Newton died at the age of 85 years; Dr. Heberden, 90; Dr. William Harvey, 79; Galileo, 78; Sir John Pringle, M.D., 75; Sir Thomas Brown, M.D., 76; Copernicus, 70; Dr. Edward Jenner, 74; the Most Rev. Dr. Whately, 77; Daniel O’Connor, 75; Lord Lyndhurst, 91. There are many public men still living and capable of discharging the duties of their respective offices with something like the vigor of youth, although they are very far advanced in years. For instance, the First Lord of the Treasury, Lord Palmerston, is now in his 80th year, yet he is capable of taking an active part in the affairs of the nation, and sitting up of a winter’s night answering questions which must be occasionally very disagreeable. Lord Brougham is in his 95th year [quere, 85th?], and yet he is at the head of the savans, delighting his auditory with his learning and eloquence. There is a judge at present sitting on the Queen’s Bench in this city 87 years old, with a vigorous intellect, and his friends say that he has made up his mind neither to die nor retire so long as the present government remain in office!’”

Probably the audience addressed by the worthy Professor was in no very great need of the assurance thus given, that there was no danger of injuring themselves by hard study. We cannot recollect a single instance where a medical student has fallen a victim to such devoted application. The Bob Sawyer element in student life is generally quite strong enough to counteract the tendency to such self-immolation. Nevertheless, the paragraph above quoted contains a very glaring fallacy, too obvious, perhaps, to need pointing out, and yet precisely such as an *ad captandum* lecturer or public speaker will gladly take up—such as we hear used every day, to defend the most extravagant doctrines of hygiene or physiology. Because the great men whom Dr. Ellis has selected from the last two or three centuries did not destroy themselves by the study by which they achieved their gigantic reputations, therefore the same amount of achievement may be looked for from common men without over-exhaustion or serious injury! It is the same as saying that there is no danger in attempting any great feat requiring immense muscular strength. Dr. Windship lifts a ton, more or less, without the least injury to himself, so, of course, no one can strain his *longissimus dorsi* or rupture a flexor tendon by trying to do the same thing! The fable of the frog and the ox is worth remembering.

Seriously speaking, we think that such teaching is likely to produce very bad effects. Dr. Ellis may never have been able to trace the death of the studious people whom he has known to excessive study, but it does not follow that death cannot be produced in this way, and that there is no need of wise caution in this as in all other matters pertaining to the right use of our faculties. We know not how exten-

sive his field of observation may have been, but we know *we* have seen instances of great injury from excessive mental application. In fact, this is the merest truism in an American community. Teachers, however, do not yet appreciate this truth, and it needs constant reiteration to keep the public alive to its reality. It was only last week that we saw a little girl, some 12 years of age, writhing and jerking with the spasms of severe chorea, unquestionably produced by over-study. She was passionately fond of her books, passed all the hours, from nine in the morning until five in the evening, with the exception of an hour's intermission at noon, in school, voluntarily prolonging her stay an hour after the morning session to assist the teacher in drilling other pupils less proficient, and in the evening studying assiduously until nine o'clock. "But does your little girl have no play time during the day?" we asked of her mother. "None," she answered, "she is so fond of her books that I can hardly drive her out of doors." We might multiply such instances, if necessary. Let us hear what a reliable witness, Dr. Ray, says in his admirable work on Mental Hygiene:—

"Among these remoter agencies in the production of mental disease," he says, "I doubt if any one, except hereditary defects, is more common, at the present time, than excessive application of the mind when young. The immediate mischief may have seemed slight, or have readily disappeared after a total separation from books and studies, aided, perhaps, by change of scene; but the brain is left in a condition of peculiar impressibility which renders it morbidly sensitive to every adverse influence."

Of course, we do not mean to say that children in our schools are universally overtasked; the majority of them, no doubt, are fully equal to the duties imposed upon them. Still, many teachers take the same ground as Dr. Ellis, and they therefore cannot be too closely watched. We have in mind at this moment a young lady who is wearing herself out—pallid, thin, with stooping shoulders and contracted chest, turning her blood into water and possibly developing tubercle by excessive devotion to study—a splendid scholar, the admiration of her teacher and her parents—who ridicule the idea that she is doing herself the least harm. She is nothing but a student. It should not be forgotten that study is work. *Over-study* is *over-work*. Does any one in his senses doubt that *over-work* will kill? Such opinions as those advanced by Dr. Ellis, when addressed to a class of medical students may produce incalculable harm, for in their hands will be placed at a future day the responsibility of a personal application of these doctrines to the occasions of professional experience. And who is there of us who has not felt in his own professional life how much his practice and opinions have been influenced and shaped for years by the teachings of his medical preceptors?

THE NEW SYDENHAM SOCIETY'S PUBLICATIONS.—The volumes lately received from the Sydenham Society for 1861 comprise the first volume of Caspar's Forensic Medicine, Selected Monographs on various subjects, the Year Book for 1860, and three life-size plates from Hebra's Atlas of Skin Diseases.

The work on Forensic Medicine is one of much value, having already run through three editions, and been translated into nearly every lan-

guage in Europe. The present translation, which has been made with much care, was carefully revised by the author himself, thus "bringing it abreast," as the translator states, "of the latest German edition." Among the most important chapters are those upon Protracted Gestation, Mummification, the Diagnosis of Blood Stains and Hæmin Crystals, Gun-shot Wounds, Burns, Poisonings, Rupture of the Coats of the Carotid Arteries (in persons hanged), Analysis of the Blood after Poisoning with Carbonic Acid Gas, the Pre-respiratory Movements of Deglutition, Injuries to the Fœtus in Utero, the Hydrostatic Test, &c. These chapters, as indeed the whole volume, will be found peculiarly interesting and instructive.

The monographs are, by Czermak on the Practical Use of the Laryngoscope; Dusch on Thrombosis of the Cerebral Sinuses; Schroeder Van der Kolk on Atrophy of the Brain; Radicke on the Application of Statistics to Medical Inquiries; and Esmarch on the Uses of Cold in Surgical Practice. This volume contains many illustrations.

The Year Book is a volume of nearly 600 pages, containing a third more matter than the one for the previous year; and the subjects are more conveniently grouped, being arranged with reference to cognate subjects.

The portraits of skin diseases are from Hebra's Atlas, and form the second fasciculus of the series. These drawings are from nature, and represent *Psoriasis diffusa*, *Ichthyosis*, *Lupus serpiginosus*, and *Alopecia areata*.

These publications are well printed, and accord with those that have before appeared; deserving the attention of those who have not already availed themselves of the privileges of membership of this flourishing and most useful association.

THE following is the memorial which was sent to the President of the United States by the Standing Committee of the Sanitary Commission, asking for the Surgeon-General the simple justice of a court martial upon the charges which have been preferred against him. As our readers are aware, the court martial is now in progress.

To His Excellency the President of the United States.

SIR,—The United States Sanitary Commission, authorized by the government to act as a Commission of Inquiry and Advice in respect to the Sanitary interests of the National Forces, have been for more than two years and a half close and careful students of the medical and hygienic affairs of the army. They ought to be, they are thought by the people of the United States to be, they claim to be, better acquainted with the workings of the Medical Department, whose deficiencies, mistakes and necessities, it is their solemn duty to discover and obviate, than any other responsible body of witnesses. Trusting in their discretion, zeal and works, the people of the loyal States have made them their almoners, to the extent of seven million of dollars worth of sanitary stores, and a million of dollars in money. The disbursement of this immense charity has brought our agents into close and continual contact with the Medical Department, to whose steady and rapid improvement from the imperfect state in which we found it, to its present degree of surprising and gratifying efficiency, we are able to lend a most indisputable testimony. We attribute this im-

mense improvement to the fact that for two years the Medical Department has been directed by Dr. W. A. Hammond, Surgeon-General; a man known to all impartial and competent judges as thoroughly scientific, highly endowed, large-minded, and an energetic and controlling administrator. He was selected for his office solely for fitness, and in our calm and deliberate judgment, his administration has more than justified all the high hopes and expectations of those who recommended him for the place.

We hear, from sources that do not permit us to doubt the fact, that cautious but systematic efforts are now making to remove Surgeon-General Hammond from office. In the name of some millions of constituents, in the name of the homes of this country, whose solicitude, liberality and watchfulness we represent, we respectfully and conscientiously protest against the secret tribunal and the indirect methods by which the good fame of the Surgeon-General has been already seriously, and we believe unjustly, aspersed. We protest, in our character of Experts, a body whose business it has been made to inquire and advise on this very subject, that the removal of Dr. Hammond would be as serious a blow at the lives, comfort and efficiency of the army as the enemy itself could inflict; that the science of the country, the humanity of its homes, and the army itself, would resent it as a cruel wrong and an alarming error; and we feel ourselves bound, in the interests of the soldiers in the field, and of those about to enter the service of the country, in defence of our own principles and convictions, and in the name of the science, the charity and the fair-mindedness of the nation, to beg that no further steps in this direction may be taken without a full and fair trial of Surgeon-General Hammond upon the charges alleged to have been secretly made against him.

December 29th, 1863.

Signed,

H. W. BELLWS,
WM. H. VAN BUREN,
WOLCOTT GIBBS,
GEO. T. STRONG,
C. R. AGNEW,

Standing Committee U. S. Sanitary Commission.

THE following letter contains some interesting facts from a quarter probably new to most of our readers:—

FT. HALLECK, IDAHO TER., Dec. 29th, 1863.

MESSRS. EDITORS,—Our command has enjoyed excellent health for the past two years, having lost but *three* men from disease, out of eight companies. A species of remittent fever, called by the citizens "mountain fever," is the prevailing disease. It is easily controlled by quinine. Pneumonia is unusually fatal, several citizens having died of it within the last year in this region. Does the altitude—6070 above the Gulf of Mexico—and the consequent rarity of the atmosphere, have any influence? This is the general impression of the inhabitants. Our meteorological table for the present month stands—Daily mean, about 18 degrees above zero. Coldest day last month, 13 degrees below zero. Have had no rain for ten months—but have awful snow storms. The soil is sandy and unfit for agriculture. The country is rich in minerals; gold, iron and coal in abundance.

Respectfully, &c.,

JOHN H. FINROCK,
Asst. Surg. 11th O. V. C.



WOUNDED AT CHICKAMAUGA.—The following extract from a letter recently received from a surgeon of volunteers at Chatanooga, will, we are sure, be read with interest.

"Whilst in the Field Hospital at Chatanooga, during the first six weeks after the battle of Chickamauga, I saw much suffering and death of course—for since the war began there has not been a great battle fought under so unfavorable circumstances for procuring comforts and even necessary supplies for the wounded. And yet the men were made comparatively comfortable in tents in the field.

"The weather was very favorable for treating the wounded; and above all, the, to me, remarkable cheerfulness of the sufferers did much toward restoring them to health.

"Of more than 3000 patients treated for all kinds of wounds (except slight ones, which were sent to Nashville immediately after the battle), but 208 deaths occurred during the first six weeks after the engagement.

"At this time all but 120 had so far recovered as to be able to be sent to Nashville, or home.

"Of the 120 remaining, one fourth, or 30, would not recover, perhaps; making 238 deaths out of 3000 wounded—*Medical News*.

The mortality of the city of New York in 1863 was 25,196. Males, 13,266; females, 11,930. Adults, 10,596; children, 14,600.—The mortality in Philadelphia was 15,788, an increase over the year 1862 of 691, or 4.38 per cent.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 23d, 1864.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	55	43	98
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.6	40.4	81.0
Average corrected to increased population	00	00	89.02
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

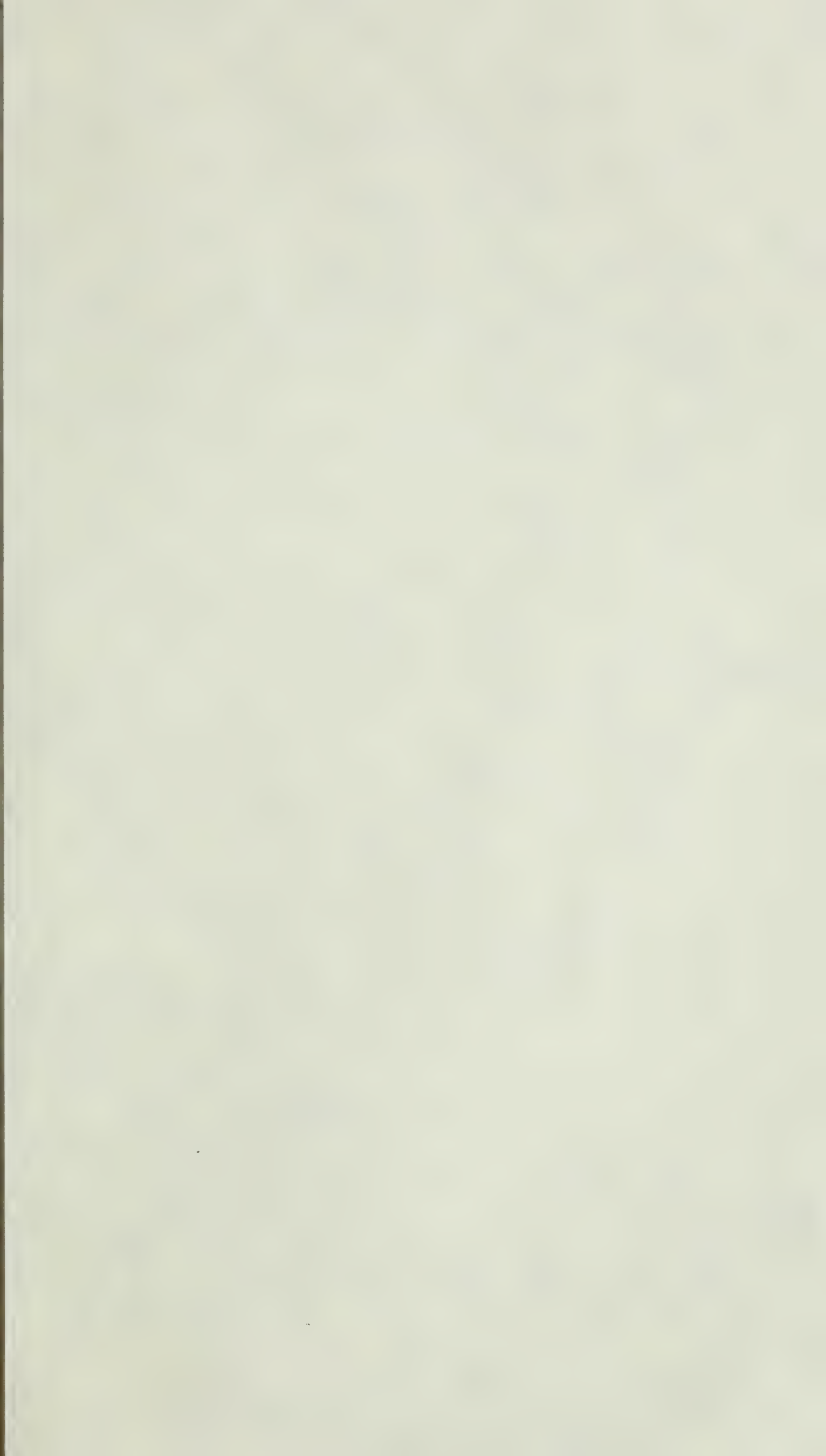
Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
13	2	11	10	0	0	5	4

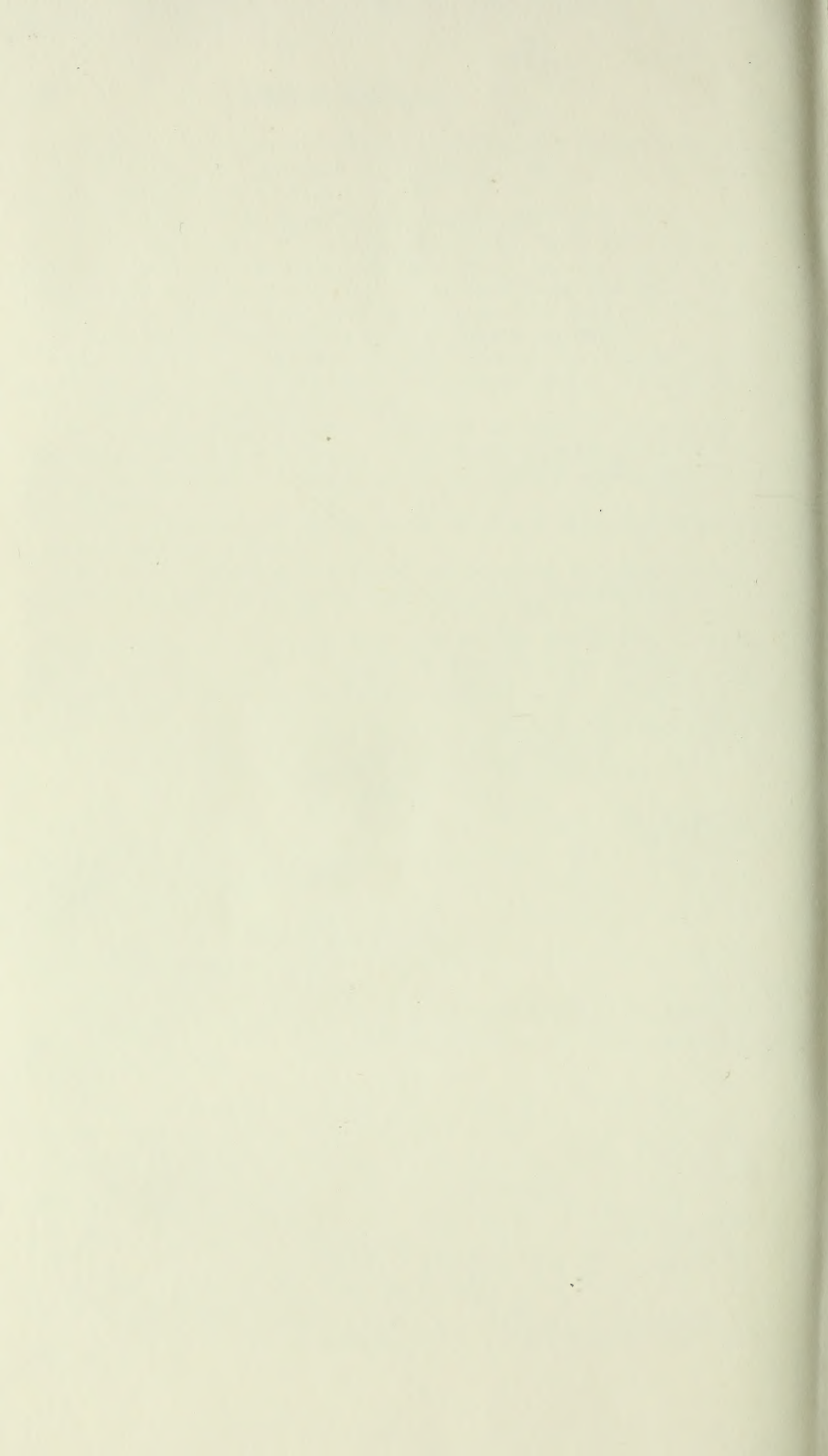
COMMUNICATIONS RECEIVED.—Ligature of the Subclavian Artery, by Dr. Armsby, of Albany; reported by Dr. M. R. Peck, of Glens Falls, N. Y.—Case of Fibrous Polypus of the Uterus, by Dr. Woodward, of Quincy.—Cases illustrating Conservative Military Surgery, by Dr. Brown, of Cambridge.

DIED,—At Alexandria, Va., 10th inst., Dr. A. M. Huxley, of Goshen, Conn.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 23d, 98. Males, 55—Females, 43.—Amputation of thigh, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 2—consumption, 13—convulsions, 1—croup, 2—debility, 2—diarrhœa, 1—diphtheria, 4—dropsy, 4—dropsy of the brain, 2—erysipelas, 2—exhaustion, 1—scarlet fever, 11—typhoid fever, 5—hæmorrhage, 1—disease of the heart, 2—homicide, 1—infantile disease, 1—inflammation of leg, 1—disease of the liver, 1—congestion of the lungs, 5—inflammation of the lungs, 10—marasmus, 2—menorrhagia, 1—old age, 1—paralysis, 2—peritonitis, 1—pleurisy, 1—scrofula, 2—sore throat, 1—syphilis, 1—trismus nascentium, 1—tumor, 1—unknown, 2—inflammation of the uterus, 1—whooping cough, 1.

Under 5 years of age, 33—between 5 and 20 years, 10—between 20 and 40 years, 21—between 40 and 60 years, 16—above 60 years, 13. Born in the United States, 58—Ireland, 33—other places, 7.





RARE

PER

